

# Manufacturers Record

## Exponent of America



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Baltimore, Md.  
MARCH 31, 1921

### "DO IT WITH ALL THY MIGHT"

Build that house now; construct that highway at once; build that school, that church; repair that broken pavement; build that garage, and even that chicken-coop, now—not tomorrow.

Go ahead with your plans; speed the nation on the road to full employment, and thus hasten the day of individual and national prosperity and safety.

Preach this from the pulpit, ye ministers of the Gospel; act it from the pews, ye laymen who profess a love for humanity; put it into effect, ye county, municipal and State officials, and remember, ye business men of America, ye men of "big business" and ye men of "little business," that there is something in this infinitely higher and more important than the small amount of money involved which you think you could save by waiting.

Some men put off the day of salvation, expecting to attend to it on their death bed, but not many ever succeed in doing it at that hour. "Do it now, and do it with all your might," should be the motto of every man in America who expects to do any construction work in the near future. "Do it now," and thus do your part toward individual and national business salvation—and even more.

Procrastination is more than the thief of time; it is the murderer of opportunity.

The foregoing from the cover page of the Manufacturers Record of March 13, 1919, applies with even greater force at the present time than it did on the day it was written. By breaking down the credit of the country and restricting business a great disaster has been brought upon the whole country; but this can be overcome and the tide turned to prosperity, and turned quickly, if the people of the country will adopt the suggestions made in the foregoing and carry them out promptly and with all their might.



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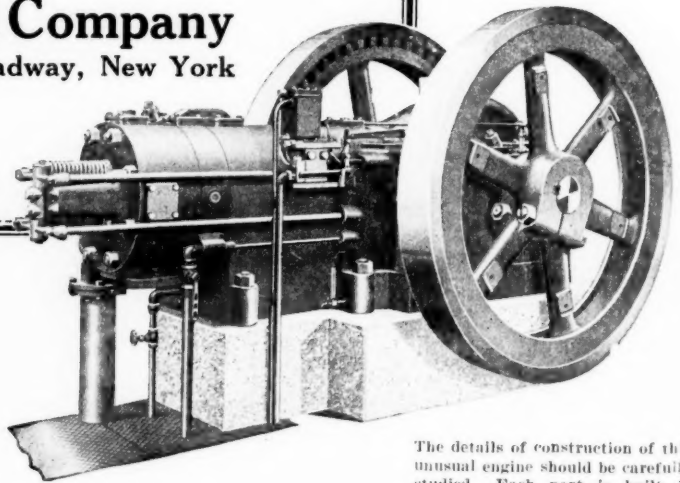
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# Ingersoll-Rand

# Manufacturers Record

Exponent of America

MARCH 31, 1921

Volume LXXIX

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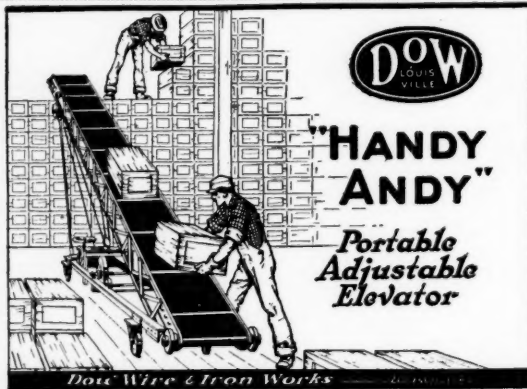
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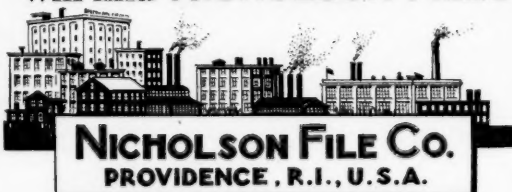
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# Manufacturers Record

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of the South and Southwest as the Nation's Greatest Material Asset

Trade-Name Registered in the U. S. Patent Office

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## WILL OTHERS FOLLOW THIS BANKER'S EXAMPLE?

Citizens Bank & Trust Co.

Jefferson, Ga., March 12.

*Editor Manufacturers Record:*

Find check for renewal of my subscription and for one year's subscription for Dr. J. C. Campbell, Jefferson, Ga., one of the finest representative characters of our section.

I appreciate your fearless presentations of your convictions on the great issues that affect the destiny of our country, and your manly courage to proclaim and defend the truth as you see it regardless of individuals or parties. One of our most worthy and influential citizens, whose subscription I sent in a few weeks back, stated to me he had learned more about the great questions of the hour in the short time he had been reading the **MANUFACTURERS RECORD** than he had ever learned before.

**I feel it a patriotic duty that every subscriber to your magazine should strive to place it in the hands of every intelligent citizen.**

We need to know the truth, for it is written, "The truth shall make you free." The Eastern sky is brightening, there is hope for the future, for it is written, "When the righteous rule, the nations rejoice." If the sentiment expressed in Mr. Harding's inaugural address came from the heart, and shall rule his acts as President, why can I not look to the future with hope?

I believe the highest form of human government is a true democracy—a government of the people, by the people, for the

people, regardless of the name called. It is useless for me to refer to conditions in the cotton belt; pen cannot picture them, and they are growing worse daily. Twelve months ago you sounded the warning and painted the picture as true as life; the conditions you predicted are here; strong men who cannot get bread for their families walking the highways, homeless, penniless and breadless. Here I drop the curtain.

Success to you in your high and noble calling.

Sincerely yours,

T. S. JOHNSON.

Mr. Johnson has recently sent us several subscriptions from friends whom he has persuaded to take the **MANUFACTURERS RECORD** because of his belief of its great value to them. "Go thou and do likewise" is our request to all subscribers.

## PROTECTION MUST COME FIRST.

SOME statesmen talk of the demand for revision of the revenue law in advance of any other legislation. The necessity for such revision is great, but collections under the new revenue law cannot begin in any case until March 15 next. Meantime, the whole agricultural industry has but a minimum interest in tax revision because there have been no profits for 1920. The first concern of farmers is to get some income on which to pay taxes. It is a matter of life or death with them—not merely the size of a tax.

America is the world's dumping ground because here, and here only, can cash be got for goods. Every day's delay in erecting a tariff barrier adds to the volume of goods forced on the market. Men prate of how to get foreign trade, when the greatest market on earth, our own, is being handed over before our eyes to foreigners, to the ruin of our own people. The immediate and supreme issue is to give American markets back to Americans. The country can get along for a few months while the revenue law is being revised, but every week's delay in protecting American markets is an irretrievable loss and renders so much more difficult the recovery of industry, not only in the country, but also in the cities.

The President is right and Mr. Fordney is right. Tariff legislation must come first, and there is hardly a farmhouse in America from which appealing eyes do not look to Washington in hope that the powers there will answer the cry for help and give the farms protection. Had the Administration erred on this great issue its doom in the 1922 elections would already have been sealed.

## SOME VIEWS OF BUSINESS MEN AND BANKERS AS TO DEFLATION POLICY OF FEDERAL RESERVE BOARD.

ONE of the foremost business men of the West, in a letter to the MANUFACTURERS RECORD, says:

"I am certainly pleased to note your outspoken bitterness concerning the deflation forced upon the country by the Federal Reserve Board. If commodity prices could have been deflated and everything else deflated at the same time, it probably would not have made so much difference; but you cannot deflate one thing and let something else remain inflated without having the devil of a time. It is just as though a man had legs six feet long and decided they had to be curtailed, but instead of beginning by making both legs the same, he cut off one leg at the knee and allowed the other one to remain its natural length. The poor chap would have a terrible time in trying to walk. \* \* \*

"The fact remains that before the Federal Reserve talk of deflation we were all getting along nicely. Business was never better, and Americans were never happier. Everybody had money like water. Now we have no business, we have no money, and things are not getting any better. Instead, they are getting worse."

A leading Atlanta banker, writing to the MANUFACTURERS RECORD about the rumors published in a number of Eastern papers that Governor Harding would be asked to remain at the head of the Federal Reserve Board, says:

"The information that Secretary Mellon desired Governor Harding to remain at the head of the Federal Reserve Board is a distinct surprise. While I assume that the Board is responsible for the deflation policy which has well-nigh bankrupted the whole country, yet Governor Harding at the head must have recommended and endorsed the scheme. His idea seems to have increased the value of the dollar and reduced the price of all properties measured by the dollar. The practice has been and is to raise rediscounts to member banks so as to discourage rediscounts by the Federal Reserve banks and in this manner to deflate currency."

Another banker, writing from South Carolina on the same subject, says that the pro-German propaganda power in this country before entering the war to get German views to the American papers was in effect as child's play compared to the extent of the propaganda put out from Washington in favor of the work of the Federal Reserve Board. This banker states the case correctly, for the power of the propaganda which emanated from the Treasury Department and other Washington sources in behalf of deflation and the work of Secretary Houston and the Federal Reserve Board and Governor Harding specifically compared in activity with the best work of the Germans in that line. Indeed, Germany could learn much in its propaganda methods of seeking to influence public sentiment from those who have handled the propaganda work in Washington.

## COVERING THE NATION.

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Indianapolis, Ind., March 19.

Editor Manufacturers Record:

We take pleasure in inclosing \$6.50 subscription for the MANUFACTURERS RECORD for ensuing year.

We only wish we had half as good a champion for the Northern States as you have made the MANUFACTURERS RECORD for the South. While we do not always agree with you on every subject, yet we respect your sincerity and broad Americanism and the able way you write your editorials. We think the front cover page should be carefully preserved and bound in a neat volume and put among the choicest books of the century. Send more missionaries up this way and see if you cannot get up an interest that will justify the publication of a Northern edition.

Yours truly,

MACHINERY CLEARING HOUSE,  
S. P. GREY.

The MANUFACTURERS RECORD, while specifically devoted to

the upbuilding of the nation through the upbuilding of the South and Southwest, is thoroughly and heartily devoted to the fullest development of every section. No narrow horizon contracts its nation-wide outlook. It is working for the whole nation.

## VINDICATED BY THE EVENTS.

IN former Secretary of State Lansing's recent book he refers to his efforts to keep Mr. Wilson from attending the Peace Conference, and in one of the notes made in his diary at the time he wrote:

"I am convinced that he is making one of the greatest mistakes of his career and will imperil his reputation. I may be in error, and hope that I am, but I prophesy trouble in Paris, and worse than trouble here. I believe the President's place is here in America." (Written Monday, November 18, 1918.)

A very similar view was expressed on November 28 by the MANUFACTURERS RECORD, though of course we had no knowledge whatever of Secretary Lansing's position. On that date, in urging that President Wilson should not go to Europe, the MANUFACTURERS RECORD said:

"We believe we voice the sentiment of the country as a whole in saying that it is a dangerous and unwise move for the President of the United States to make. If President Wilson should attempt in Europe to push his own views of peace with the vigor that he pushes his views on Congress, it is altogether certain that great friction would be developed. England, France, Belgium, Italy and Serbia, who have fought for self-preservation and for civilization for two and a half years before we entered the struggle, and who know from personal experience what this war has meant in a way that we cannot possibly do, will inevitably have a deciding voice in the terms of peace and the terms of punishment inflicted upon Germany. It would be regrettable for the President of the United States to be placed in a position of antagonism directly on the spot. \* \* \*

"We earnestly hope that President Wilson will change his mind, and by reason of Mr. McAdoo's resignation, or for some other cause, remain in Washington instead of going abroad."

On December 5, under the heading Possible Dangers in President Wilson's Trip to Europe, in closing a lengthy editorial against President Wilson's trip to Europe, we said:

"Today America stands out before the world as an object almost of adoration. President Wilson is by the world at large regarded as typifying the spirit of idealism in its highest form. It would be a world disaster if his personal presence at the Peace Conference should create a friction which would lower the world's appreciation of this country and take us down from the pedestal on which we now stand.

"We cannot expect Great Britain for one moment to yield its position on sea power. It lives by the sea and upon the sea, and by the power of its fleet it has saved the world from German domination. To suggest a 'freedom of the seas' which lessens the power of Great Britain to protect itself and to protect civilization, as it has done in this case, would be without the shadow of a shade of foundation, and we have no right to ask Great Britain to consent to such a condition. To expect that France, Italy, Belgium and Great Britain shall not have the final deciding voice in the terms of punishment to be imposed upon Germany would be to range ourselves as upholders and defenders of Germany.

"At this peace table, therefore, President Wilson will be placed in a position which may ultimately prove embarrassing to him, lessen the world's lofty appreciation of his work, and take from America that pre-eminent position which it now holds."

Secretary Lansing, in commenting in his book on the advice that he gave to President Wilson against going to Europe and on the paragraph from his diary from which we have quoted, adds:

"Whether the decision of Mr. Wilson was wise and whether my prophecy was fulfilled I leave to the judgment of others."

The MANUFACTURERS RECORD in the same way leaves to the judgment of its readers whether the opposition it expressed in November and December, 1918, against Mr. Wilson's trip to Europe was wise or not, and whether or not the predictions then made have been fulfilled.

## Which Will the Administration and the Country Choose?

THERE were two ways of meeting the business and industrial situation a year ago. These have often been pointed out by the MANUFACTURERS RECORD. One of them was when the volume of business exceeded the transportation facilities of the country to break business down to the point where it would be in keeping with railroad facilities, or else to develop transportation facilities up to the point to meet expanding business. One was when business was prosperous and men well employed and everything moving forward with giant strides demanding larger banking and credit facilities, for broadminded intelligent financiers to develop credit up to the point to meet growing business, or else the method that seemed simpler from the narrow point of view: that is, to limit credit and break down business, destroy prosperity and throw millions of people out of employment in order that business might come down to the level of easily provided credit; one way was to stop all construction activities so that the demand for raw materials would be so small that a limited operation of industrial plants would lessen the needs of the country; the other was to stimulate construction activities and thus stimulate the development of new plants and of national prosperity; one way was to bring about gradual deflation by increased production; the other was to destroy production and force deflation in that way.

For two years the Administration and its followers preferred to take the narrow-visioned way. Definite plans were laid in Washington for breaking down prices to the point where credit facilities and transportation facilities would be more than equal to the volume of business. We have the fruition of that campaign now with several hundred thousand cars idle, whereas a year ago hundreds of thousands of additional cars were needed to handle the volume of business offered. We have business prosperity destroyed to the point that credit facilities for the limited amount of business now on hand can be more easily provided. At least that has been the theory. But people sometimes refuse to recognize that credit deflation brings on such business chaos that there is not much opportunity for credit needs.

In the end the policy pursued by the recent Administration proved overwhelmingly disastrous and we are paying the penalty for it.

There is another way in which to meet such problems as we have faced. It is by broad constructive development work and by daring to do new things out of which to create wealth in order to pay the indebtedness already accumulated. If an individual finds himself hampered by debts, but knows that he has an undeveloped asset of enormous value, he finds that the wise course is to enlarge his indebtedness in order to utilize this latent asset and thus pay off the more easily his whole indebtedness. This point is interestingly presented in a letter by Mr. Charles P. Craig, executive director of the Great Lakes-St. Lawrence Tidewater Association, who, writing from Duluth to the MANUFACTURERS RECORD, says:

"In talking about the Lakes-to-Ocean project with members of Congress we frequently hear a man say that it is a deserving project, but that, of course, no such expenditure should be entertained in the present condition of national finances.

"Is he right?

"We owe a debt of billions. We can pay off that debt by squeezing down the salaries of stenographers from \$100 to \$90, by trimming the appropriation for fighting hog cholera and the boll-weevil, by cutting out some of the work of the Bureau of Standards. By rigid economy of that sort we can pay off the debt in time. But how long is it going to take to raise \$15,000,-

000,000 by cutting off \$10 a month from the wages of, say, 100,000 stenographers. Remembering that the whole cost of running administrative departments is such a tiny fraction of the total transactions of the Treasury, it looks like a dreary program.

"Why not pay off the debt by creating new resources?

"After the Civil War the currency was depreciated, as it is not now; the Government bonds were unsalable, the country was poor, and half of it was exhausted. What was done? We built the Pacific roads, and in the period of expansion induced by that and other courageous moves the debt was reduced in amazingly quick time.

"I am thinking especially of the St. Lawrence proposition, which is my particular hobby. Perhaps there are other developments equally fruitful if we adopted them. But I am sure of this: That the St. Lawrence improvement itself will open up new resources amounting to the discovery of a continent. It will bring above the horizon a region 1000 miles long and 500 miles wide which is now partially or wholly submerged.

"In the Mountain States producers are actually going out of business because of the cost of getting to market. In the richest agricultural State of the Union—Iowa—production is handicapped by the fact that Argentina corn can be laid down in New York at cheaper cost of transportation than Iowa corn.

"Ought we not to begin preaching the bold doctrine? Let Congress by all means frown upon extravagance and check expenditures rigidly. But let Congress know that the way to be rid of the war burdens is to adopt the courageous policy of finding and developing new resources.

Mr. Craig points to the road which we believe leads to prosperity, and that is not by continued drastic deflation by the Government or by banking institutions, but by broad constructive work which will create wealth out of which to pay our national indebtedness. It was the opening up of the empire of the West after the Civil War that made possible the vast prosperity which made the paying off of our national indebtedness a very simple matter, offering an opportunity for broad constructive work which would create such new wealth as to enable us to carry without difficulty the burden of indebtedness which we now have. Mr. Craig thinks that one of these enterprises is the proposed deepening of the St. Lawrence River. There are many others offering attractive opportunities for the employment of people and the creation of wealth.

Prior to the war our national wealth was increasing at the rate of more than \$12,000,000,000 a year. In the last twelve months it has decreased by more than \$25,000,000,000, due to unwise restriction of credit. The inherent advantages of the country are as great as they were before the war. The things that need to be done in this country, if promptly done, would create such a demand that we would scarcely have to think about foreign trade. The building of the railroads needed and the reconstruction of existing roads, the building of the 2,000,000 or 3,000,000 dwellings which are essential to the best interests of the country, the building of the hotels and schools and churches and warehouses and factories which under normal conditions would be needed, would steadily employ every industrial enterprise in the country, leaving but a very small surplus in any line, except perchance in cotton, demanding an export outlet.

We have a mighty empire, the most richly endowed on earth. Through its development we can create employment for every man in this country and wealth which would far surpass the gain of wealth prior to 1914. But if we take a narrow view and say that penurious economy in expenditure is the way to get back to prosperity, it will be many a long day before we get there. If we boldly, courageously say that we propose as a nation to supply credit facilities to develop to the utmost the resources of this country, we propose to rebuild our railroads, to build thousands of miles of new line, to extend our highway improvements and erect the buildings so badly needed for housing the people, we shall go forward quickly in a great upward-onward movement of prosperity. Which will this country choose?



## ATTORNEY-GENERAL DAUGHERTY.

**A**FTER the election of President Harding a great many newspapers throughout the country were constantly criticizing Mr. Daugherty, who, it was reported, would probably be made a member of the Cabinet. The slurs and insinuations against Mr. Daugherty were of such a kind that we never quite understood their origin until we learned that he was a bitter opponent of the entire liquor interests of the country. It was easy enough then to see why so bitter a fight was being made to keep him out of the Cabinet.

In an address at Daytona Beach, Fla., some days ago Rev. Sam Small, the noted lecturer, is quoted by the Daytona News as giving the following facts about Mr. Daugherty, which indicate the reason why the whiskey element was so vigorously in the fight against him:

"Mr. Small gave the last portion of his eloquent address to an appeal for the enforcement of the national prohibition amendment. 'There is not the slightest question but this law will be enforced by the American people. They are not of the kind to start something and then desert it. Prohibition is in the Constitution to stay. It took 36 States to put it there, and when the test came we had 45 for it and only 3 against it. Now we are doing the riding. It will now take 36 States to take it out of the Constitution and only 13 to keep it in there. Not a chance in the world to beat us. I speak advisedly when I say the booze boosters will find no sympathy, consolation or assistance from President Harding. He will stand for its strict enforcement. But what is still better, Attorney-General Harry M. Daugherty is a 100 per cent prohibitionist. He helped us more than any other one man, and without price, to write prohibition in the Constitution of Ohio. More people opposed his appointment to a place in the Cabinet because he is a prohibitionist than for all other reasons together. All of the liquor men were united against him, but in spite of it all President Harding named him, and this speaks volumes. Another thing, the arrangements are all made and a law will be passed within a few months transferring to the Department of Justice, of which Mr. Daugherty is the head, the entire work of enforcing prohibition. Our appropriation for this purpose is to be increased to \$10,000,000 annually at once, and it will not be long until we are provided with still more. I predict that with 24 more months this will be just as much a bone-dry country as Harry Daugherty is a bone-dry Attorney-General, and that will suit us all right.'"

## A SENSIBLE LABOR LEADER'S VIEWS.

**J**OHN H. FERGUSON, former president of the local Federation of Labor, Baltimore, whose sanity and conservatism in the handling and discussion of labor problems did not suit the radical element of labor in that city, has an interesting article in the March 5 issue of the Labor Leader of Baltimore, in which he tells of the exodus from Baltimore of a number of large clothing manufacturers by reason of the radicalism which is ruling among the clothing operatives in the city. "Baltimore," said he, "was once the fourth clothing market in the United States, but now many of the factories are being transferred to other parts of the State and to Virginia and Pennsylvania to get rid of the radicalism of the labor element."

Commenting on this situation, Mr. Ferguson says:

**"If other men wish to work as garmentworkers, their indisputable right is to do so, and interference with any in any hostile manner by any other men is criminal."**

Then he warns the city and the laboring people that the lawlessness ruling among the garmentmakers should not be tolerated.

Mr. Ferguson has long been noted for his level-headedness, for his conservatism and his devotion to the best interests of labor. It is well, therefore, that through a labor paper he is presenting the situation so clearly, for this country cannot tolerate the criminality which undertakes to molest and murder men who refuse to go on a strike or to join a union, unless it proposes to doom itself to destruction.

## UNLOCK THE DOOR!

**B**Y accident, a living man was incarcerated in a tomb, and a workman, passing by, heard his call for help and rescue. He dashed madly about summoning aid, and soon a number of persons had assembled. One set of men, with drills, began to cut a hole through the cement and steel wall of the tomb. Another set began the construction of a tunnel underground, expecting in that way to effect a rescue. But the walls were adamant and the drills made little headway, and the diggers, when they attempted to force an entrance from underneath, were equally unsuccessful. There was a division of counsel, one saying one thing and another another, while the imprisoned man grew weaker, minute by minute, for want of air.

A stranger passing by was attracted by the commotion. "Alas," they said to him, "our friend is unfortunately entombed and is almost in extremis. We have tried this device and that device, but we cannot effect an entrance. Woe on us! Woe on us!"

"I suggest," said the stranger, "that you unlock the door." As the key was readily obtainable, this stratagem was resorted to. The imprisoned man was brought out, quickly revived in the fresh air and returned to the routine of daily business.

We have a great mass of experts telling us that this or that will restore the business of America and the world. One says one thing, and another says another, and they all are filled with devices. But the key that will unlock the prison in which business is entombed is the same key that locked the door when the supposed cadaver was taken in. The Federal Reserve Board holds that key. It can do more for the restoration of normalcy than all other factors combined. And unless it does loosen credit restrictions, all other factors combined cannot effect a rescue.

The British Chancellor of the Exchequer, Mr. Austin Chamberlain, gives warning that there is little immediate chance for a lowering of the bank rate though "the Government recognizes that this might prove the most important factor in causing a stimulation of business." It is the only stimulant that can be administered with a certainty of good results, if it be fair to call it a stimulant. It is, in truth, a food, an essential food, of which American business is being deprived.

It is time to desist from abortive attempts to disentomb imprisoned business by means of indirect and experimental devices. The thing to do is to unlock the door, and only the Federal Reserve Board can do that.

## MERELY THE RESULT OF DELIBERATE DETERMINATION TO BEGIN PRICE-CUTTING ON THE FARMS.

The Perry O. Johns Post,  
American Legion Post No. 6, Department of Mississippi.

Corinth, Miss., March 11.

Editor Manufacturers Record:

You will be interested to know that the sample of cotton which I am herewith enclosing, which you will notice is a little stained, is selling at 4½ cents a pound here today, or \$22.50 per bale of five hundred (500) pounds, and the best high-grade white cotton is now selling at 10½ cents per pound, or, say, \$52.50 per bale.

No further comment in this is necessary on the economic condition of the South, except possibly to remark that the above-mentioned selling price of this cotton is possibly less than half of the cost of production.

How are cotton farmers to live under such conditions?

WINFRED C. ADAMS, Post Commander.

Cotton farmers are not expected to live under such conditions, only to exist, and barely to exist at that; but do not overlook the fact that to break down prices was the plan announced by President Wilson in August, 1919, and carried out by his Federal Reserve Board.



## How to Rebuild National Prosperity—President Harding's Responsibility and Opportunity

ON February 2, 1837, President John Quincy Adams, in a letter to a New England minister, said:

"The great effort of my Administration was to mature into a permanent and regular system the application of all the superfluous revenue of the Union to internal improvements, which at this day would have afforded high wages and constant employment to hundreds of thousands of laborers, and in which every dollar expended would have repaid itself fourfold in the enhanced value of the public lands. With this system, in ten years from this day the surface of the whole Union would have been checked over with railroads and canals. It may still be done half a century later, and with the limping gait of State (not Federal) legislation and private adventure. I would have done it in the administration of the affairs of the nation. I laid the foundation of it all by a resolution offered in the Senate of the United States in 1806, and adopted under another's name.

"When I came to the Presidency the principle of internal improvement was swelling the tide of public prosperity. \* \* \*

"I fell, and with me fell—I fear never to rise again, certainly never to rise again in my day—the system of internal improvement by means of national energies. The great object of my life, therefore, as applied to the administration of the Government of the United States, has failed. The American Union, as a moral person in the family of nations, is to live from hand to mouth, and to cast away instead of using for the improvement of its own condition the bounties of Providence."

President Adams, we take it, did not have in mind the superfluous revenue of the National Government itself, but the surplus revenue of the increasing wealth of the nation which he desired to use under Federal direction for the fullest possible development of internal improvements, in order that the surface of the whole nation might be checked over with railroads and canals and other internal improvements which would have afforded constant employment to hundreds of thousands of laborers, and in which he rightly says: "Every dollar expended would have repaid itself fourfold in the enhanced value of public lands."

All that President Adams in 1837 saw as to the power of this internal development work for creating prosperity and advancing the nation's welfare can with even more appropriateness be applied to the present situation.

In commenting on this remarkable letter from President Adams, Mr. Moreton Frewen of London quotes from an address of last March by Mr. Robert Benson, the chairman of the Merchants' Trust "whose long residence in America," he says, "adds authority to his statement." In this address, reciting the methods used after the Civil War, Mr. Benson said:

"Americans set to work with equal promptitude and energy, but in order to get out of debt they had first to go deeper into debt. Whereas the United States was left with a public debt in 1865 of 500,000,000 pounds, they went further into debt for reconstruction during 1865-1869 to the extent of 300,000,000 pounds. They developed productive industry all over their incomparable estate, and they permitted no forcible contraction or deflation of currency and credit to block the way."

The immediate effect of this wise and far-sighted policy "all over their incomparable estate," a policy which Mr. Benson says was denounced as sheer lunacy by the economists of the press, and which increased the national debt by some 60 per cent in the first five years of peace, resulted in a magnificent expansion of the Government's income, while side by side with fresh borrowings taxation was reduced as never before. This was illustrated in a statement by Senator Hoar of Massachusetts, who, referring to the lessened taxation during the years 1865 to 1872, said:

"The Worcester district, which I represent, paid in direct form of taxes to the National Treasury the enormous sum of \$3,662,727 for the year ending June 30, 1866; for the year ending June 30, 1872, they amounted to about \$100,000.

"Thus this country by a bold, wise increase of its debt after the

Civil War began a period of material development which enormously increased its wealth and enabled the Government rapidly to decrease the total of its outstanding bonds."

In quoting the facts stated by Mr. Benson, Mr. Frewen was appealing to Great Britain to begin by national expenditures the fullest development of its enormous resources in Canada, holding that if Great Britain would undertake such a work its results would be as stated by Lord Milner, "the development of the State by the State for the State."

The plea which Mr. Frewen makes for a broad expenditure by Great Britain, burdened by debt as it is, in order to increase its wealth with such rapidity that its indebtedness would be more easily carried and paid, is a plea which might with even more appropriateness be applied to this country.

This is not a time for closing down on construction work. The plea of economy is a wise one from many points of view so far as actual waste and extravagance are concerned, but wherever a dollar can be invested to return, as President Adams said, a fourfold profit to the country, it is wise economy to spend that dollar. We can the more easily carry our indebtedness if we are broad enough to carry on a great campaign of internal improvement which would make for the employment not simply of hundreds of thousands of hands, as in President Adams' day, but in the employment of millions of hands doing the work that must be done if the nation would utilize its now unutilized assets, cut with a drastic cut every waste and extravagance, extend the payment of all our national indebtedness for fifty years or more, and then utilize all of the available resources of the nation during the next five or ten years for construction work, and we would once more increase national wealth at a rate which twenty-five years hence would make the indebtedness of the country seem triflingly small. Indeed, it is within the range of possibility to cause our wealth to increase at an annual rate ten to fifteen years hence greater than the total indebtedness of the country at the present time.

There are vast resources to be developed, vast enterprises to be carried out, vast water-powers running idly to the sea, wasting untold millions of annual wealth; vast railroad construction that must be done to save from a breakdown our transportation system, vast highway building running into the hundreds of thousands of miles of road, every mile of which would bring a fourfold return, and, indeed, many miles of which would annually be worth more to the country than their total cost. Millions of dwellings and other buildings need to be constructed. Here is a country of 105,000,000 people, virile, active, boundless in their energy, with resources greater than known elsewhere on earth, with coal and iron and marbles and granites and sulphur and oil and gas, water-powers and timber, and a soil of limitless productive power, and we stand almost idly over these resources because business has been shackled.

The spirit of the people has been benumbed by the chilling blasts of deflation of credit.

We know of our resources, we are ambitious to develop them, ambitious as a nation and as individuals to go forward, but we stand almost still; indeed, for the last twelve months we have been slipping backward, forced backward by the club which was used for the purpose of beating down prices and prosperity.

What a superb opportunity, unmatched in the history of the country awaits a leadership which will quicken the life-blood of the country, which will stir the heroic element in

the business life, which will say that credit shall no longer be withheld, but that the nation shall go forward into prosperity!

President Harding faces this stupendous opportunity, this unparalleled responsibility. Upon his Administration and the leadership of the men around him depends whether we shall halt and limp and gradually, after years of struggle, pull ourselves out of the mire, or whether we shall leap forward, which is within our power, in a national constructive era which will once more cause to be heard throughout the land "the music of progress, the whirr of the spindle, the roar of the furnace and the throb of the locomotive."

### MORE BUILDING ACTIVITY TO COME.

**R** EPORTS from nearly every town in Florida show a very marked increase in building activity. The Daytona papers report that about 300 dwellings are under construction in what is known as the Triple Cities—Daytona, Daytona Beach and Seabreeze—and that these communities are counting upon an average of two new dwellings a day for the next 12 months. Orlando is alive with building work, and everywhere one turns new dwellings are seen under construction. From St. Petersburg, West Palm Beach, Miami and practically from every point in the State similar reports are seen in the local papers. Florida has not felt the business depression to the same extent other States have, largely because Florida has for years worked unceasingly for the winter tourist business and for good highways and is now reaping the harvest from the seed thus sown.

The expenditure of upward of \$5,000,000 is involved in construction projects in the vicinity of Jacksonville, including those for which plans are now being completed. The St. Johns River bridge is nearing completion at a cost of \$1,195,000, and general construction work, estimated to cost over \$1,000,000, is now actually under way. New church buildings to be erected and those now nearing completion will necessitate a total investment of over \$1,000,000, and include church buildings for the heart of the city costing \$450,000, those for Springfield costing \$275,000 and about \$300,000 for Riverside church buildings.

The recent reductions in the prices of building materials and increased efficiency of labor, coupled with lower wages, are stimulating construction of industrial plants, business houses, dwellings and other structures in Jacksonville. Included in the work now proposed and under way are the following: Two five-story buildings, to cost \$150,000 and \$200,000; \$300,000 department store; seven-story business building and garage, \$400,000; new viaduct, \$350,000; additions and improvements to the municipal docks, \$800,000, and a coal tipple, \$50,000.

Architects, engineers and contractors have a large number of projects in final course of preparation, and indications are that this year will be one of steadily increasing building activity. In January 227 building permits were issued in Jacksonville for construction work of all characters, estimated to cost \$481,202, while during February 246 permits were issued involving the expenditure of approximately \$488,417.

Pensacola building permits in January numbered 95, involving the expenditure of about \$58,000, while during February 78 permits were issued, with a valuation of \$304,799.

Similarly, 96 permits were issued in Tampa during the first month of the year for work estimated to cost \$97,975, while during February 117 permits were issued with a total valuation of \$287,355.

As our "Construction Department" shows, many enterprises, great and small, are under way in all parts of the South. Especially is this true of municipal improvements, of high-

way building and similar work. In these lines of activity the coming 12 months will probably show much the greatest progress the South has ever made. Cotton is low in price, with many disastrous results, but, as many times in the past when faced by difficulties, the South "will spit on its hands and take a fresh hold." It is not giving to despair, not going to give up by any manner of means, but out of the thistle of difficulties it is going to pluck the flower of progress and prosperity.

### THE RAILROADS ALSO ARE BEING "DEFLATED" INTO BANKRUPTCY.

**T** HE railroad situation is perilous and grave. There is not enough traffic. The difficulties of securing necessary money are almost insurmountable. Some experts are saying privately that loans aggregating \$1,500,000,000 must be obtained within the immediate future, and that the only way to get it will be to have the Government underwrite a bond issue. Into such straits has the richest nation on earth come in one short year, while billions of wealth are virtually unusable as collateral for the obtaining of credit! Into such a state has the nation been driven because traffic that a year ago was so abundant as apparently to necessitate priority orders is now so meagre that idle cars are everywhere! Rates and wages were based on the crest cost marks of last year. Deflation has transmuted the adjustment then made into an impossible status. What might have been a solution has become merely a new problem.

Why should the railroads go to Congress and the taxpayer for \$1,500,000,000 or any amount? The railroads can borrow money in the open market when credit restrictions are eased. The easing of credits would, at the same time, set traffic into motion. It is useless to look to Congress or to the Interstate Commerce Commission for first aid to the railroads. The palliative, if not the cure, for their troubles, as for many of the other troubles of the country, is to be found in the meeting place of the Federal Reserve Board and nowhere else.

### FOOLED AGAIN.

**"I** WAS talking to a staunch Democrat the other day, who seemed very much disappointed to think that there had been no material change in industrial conditions in this district," said C. E. Nixon.

"He stated that President Harding had been in office 48 hours and he hadn't seen a single dollar growing on trees. He declared, to hear the Republicans talking before the inauguration, money would be growing on trees as soon as Mr. Harding took office, and everything in this district would be operating on full time the next day.

"He seemed disappointed that this had not been the case and wondered whether the Republican Administration would do any better than the Democratic had.—Hotel Notes in Birmingham Age-Herald.

Is it possible that these hotel notes are written not about hotel visitors, but about inmates of the insane asylum? This one would certainly fit the latter.

After eight years of cutting down the trees of prosperity and sowing the seeds of socialism and control of Government by Sam Gompers and other labor leaders, only a brain fit for an insane asylum would have expected that the old stumps could be rooted up and new trees planted ready to bear the fruit of prosperity in 48 hours. We must do much work to nourish the new trees that have been planted before we can gather the harvest of prosperity. It won't pay to be like children, who pull up every day the seeds they have planted in order to see if they are sprouting.

## Have the Predictions Made Four Years Ago Been Fulfilled?

**R**UNNING through the files of the MANUFACTURERS RECORD for the last few years it is interesting to repeat some of the statements made several years ago in regard to business conditions which would follow the war if a deflation of credit was undertaken and the prosperity which would prevail if there should be no attempt to bring about drastic deflation.

On July 5, 1917, in a discussion of the necessity of increasing production, we said:

**"No more serious mistake could be made than to undertake to force prices down to a point where there was but little margin or profit for the products of the farm or factory. It is only in big profits that there will be found increasing output sufficient to meet the world's requirements. \* \* \***

"Prices will be regulated eventually by the law of supply and demand if the Government prevents the cornering of markets, but let us not make the mistake of hampering operations on the farm or in the factory by undertaking to force prices to a point where they would not tempt the utmost exertion of the individual capitalist and of every business organization to increase production."

In forcing prices down the Government went entirely contrary to the suggestions quoted and the outcome has been exactly as we predicted.

On July 24, 1919, we said:

"The war was fought not on cash but on credit secured by mortgaging our future. The enormous debts incurred cannot be carried and eventually paid except by the maintenance of high wages, and that means high prices for everything produced by labor.

**"To undertake to deflate the world's currency within the next few years would be a fatal mistake. If accomplished it would bring about industrial and financial chaos which would feed the fires of anarchy and duplicate in many countries the conditions which prevail in Russia. \* \* \***

"An empty stomach is a breeding place for anarchy and Bolshevism. An empty stomach is a better workshop for the devil than an idle brain."

On May 22, 1919, we said:

**"This inflation cannot be curtailed for a good many years without a financial and industrial collapse which would shake the civilization of the world beyond anything we have known. \* \* \***

"The efforts of those who would break down prices of materials and labor and foodstuffs is fundamentally wrong."

On May 1, 1919, under the heading, "Which do you choose—Prosperity and Safety or Poverty and National Danger?" we said:

"It is entirely possible to bring about a condition in which wages and the cost of materials will be lower, but if we are to accomplish that it will be through a complete destruction of business and a development of social unrest which will cost the individual and the country many times as much as it would cost to go ahead on construction work. We can carry forward the activities of the nation on the present plan and bring abounding prosperity to everybody and quiet the wild Bolshevistic and Socialistic agitation, or we can keep on holding off and holding off, refusing to do this work or that work, hoping thereby to save a few dollars in wages or materials until we have brought such stagnation as to make certain drastic destruction of all prosperity."

On April 3, 1919, in publishing an extract from an address by Senator Underwood of Alabama, we said:

"The MANUFACTURERS RECORD has taken the same views as those expressed by Senator Underwood. We are in a period of great world inflation. \* \* \*

"Senator Underwood in his statement said:

"We are not on a gold basis. Nobody tried to get gold out of the Treasury during the war, but if they had they would not have gotten it."

And then commenting on the financial situation and the decreased purchasing power of the dollar said:

"They are measuring by the wrong standard, by the wrong yardstick."

Unfortunately the power of the financial forces in Washington were sufficiently great to make Senator Underwood's statement fail of fulfillment. But what he said was based on what should have been the policy pursued by the Federal Reserve Board and Secretary Houston.

We might follow with many quotations of the kind from the MANUFACTURERS RECORD during the last two or three years, going back to the early part of 1917 and even further than that, showing that we clearly pointed out from time to time that under the condition of world inflation prosperity could be maintained and the farm and the factory kept in profitable operation. But over and over again in these statements, as far back as 1917, we constantly warned the country against the danger of deflation if our Government, or the bankers connected therewith, should unwisely adopt a policy for which there could be no possible excuse except one based on the lack of ethics or lack of financial judgment.

**The nation is now paying the penalty for the tremendous mistakes made in the deflation of credit and our deflation of credit helped to bring about not only the chaos in this country but the chaos in business throughout the world.**

Many bankers who thought the advice that we were giving on the subject was unwise and that our fears were groundless, upholding the Federal Reserve Board's actions as against our contention, now realize the blunder which they made. They now see that the Federal Reserve Board's plan was rankly wrong, but comparatively few of them are in a position where they can express their opinion frankly for fear of the power of the Federal Reserve Board over them. Many of these bankers, however, are engaged in advising a lowering of discount rates by the Federal Reserve Board as one step toward lessening the pressure upon the country and easing the financial situation.

Surely President Harding and Secretary Mellon, realizing the desperately dangerous situation which has developed by reason of this false financial system, will bring about some change and eliminate from the control of the Federal Reserve Board as far as may be possible under the law the power of those who have been responsible for bringing about the vast destruction of business which has swept out of existence values on farm and mine and factory producers and on securities of over \$25,000,000,000, or largely more than the bonded cost of the war to this country. But to make sure of this every man who has felt the disastrous effects of that policy should make his views known to President Harding and Secretary Mellon.

### ONE DOOR OPENED.

**T**HE Observer has been inclined to believe that Secretary Houston's stand-out against financing exports to Germany, based on the ground that this country was yet technically at war with that country, was of spiteful flimsiness. We always entertained the feeling that the Secretary was maintaining that position by way of rebuke to the Republicans for their war



against the League. It was hard to believe that a Cabinet officer, upon whose decisions so much weal or woe depended for the country, would allow himself to be influenced by partisan feeling to that extent, and yet it has looked like a good case against Mr. Houston. With the going out of that Secretary, the War Finance Corporation has made the very sensible ruling that it will extend loans to help in moving our exports to Germany. The people know that once these exports are started, conditions in this country are bound to begin "looking up," for the German demand will be enormous. It is the same with other European countries. If this Government will only drop politics long enough to enact legislation, or utilize legislation already enacted, that will open the doors of the European markets to American products, the one great obstacle in the way of a return to normal will have been removed. The hands of the War Finance Corporation are now evidently untied, and the country should have reason to look for early development of better business conditions. It is a Wilson man and a North Carolinian, be it remembered, that has opened this door.—Charlotte Observer.

And will the Observer bear in mind that it was a Wilson man and a North Carolina man, Secretary Houston, who closed and locked the door of the War Finance Corporation over vigorous protests, and who fought against the door being reopened by the revival of the board, and that it was not until Congress overruled Houston and President Wilson was the Board re-established, and that, too, over the protest of Carter Glass and other Administration leaders? Let it never be forgotten that false leaders who were responsible for the chaos of business and the tremendous losses to the country, such as Houston and his followers, betrayed the South and the nation and brought unspeakable suffering to the country.

The nation may well thank God that Houston has now been eliminated, and pray that the whole crowd of deflationists and business wreckers be swept out of office.

And let it also be remembered that many Southern papers fought the revival of the War Finance Board and said it could never do any good.

We think Houston's fight against the War Finance Board had nothing whatever to do with our technical state of war with Germany. He opposed it entirely without reference to Germany, and we are quite sure that the inside facts will yet reveal that Houston definitely and knowingly sought to break down prices of farm products just as a high official of the New York Federal Reserve Bank was quoted in 1919 that this bank had determined to break down prices of securities. **The Manufacturers Record published that statement in November, 1919.**

## DEFEAT DESERVEDLY COMES TO "ILLEGAL AND IMMORAL" STRIKE OF ALABAMA COAL MINERS.

**T**HE Alabama coal strike of 1920-21, which had its illegal inception in the order of the United Mine Workers of America last September, came legally to an end on Saturday, March 19, when Governor Kilby, in a decision characterizing the strike as "illegal and immoral," upheld from every angle the position taken by the mine operators who, from the beginning, had resisted the demands of the union.

The coal mine operators of Alabama, who fought to a finish for the right of their men, untrammelled and undictated to by the unions, to work under conditions to themselves satisfactory, deserve the highest commendation. Theirs is the battle of democratic civilization. Theirs is the fundamental fight for the right of individual contract. They have won. Labor conditions in Alabama, aye, in the United States, are better for the fight; the menace of dictatorial labor union chiefs, which at times threatens to spread like a blight over American industry, is again abated. We want nor need no "dictatorship of the proletariat" in these United States. The union

based its strike entirely upon a demand for recognition, and upon that issue it went down to defeat.

Some members of the United Mine Workers of America in the Alabama coal fields struck first on May 9, 1920, at a few of the smaller domestic mines, in an effort to compel recognition by the operators of their organization. Union members at other mines struck, some during the summer and some as a result of the general strike ordered in September; all with one purpose—the recognition of the union.

Conditions of lawlessness followed logically in the train of these strikes, though the operators so quickly replaced the men who had gone out that in February of this year it was generally conceded that the strike had been won in all but name. Coal was being produced at that time to an extent greater than it could be absorbed by the market.

However, on February 21, it was agreed by both sides that the matter in dispute should be referred to Governor Kilby, and that his decision would be accepted as final. The Governor named a committee of three: William T. Sheehan, editor of the Montgomery Advertiser; Richard M. Hobbie, wholesale grocer, and John W. Durr, wholesale druggist, all of Montgomery, to investigate. These three men spent a week in the coal fields gathering facts for presentation to the Governor. They interviewed business and professional men, and they heard testimony from the operators and from the striking miners. In making its report to the Governor, the committee declared:

"We have reached the conclusion, and so recommend to Your Excellency, that it would not be to the interest of the people of the State to recognize the United Mine Workers of America, either directly through a decision to force all operators to operate under a union contract, or indirectly through such contracts as would set up the machinery by which there would be interference by outsiders in the adjustment of the troubles of any individual mine."

In reaching his decision Governor Kilby closely followed the recommendations of these members of his committee. In fact, it is hard to see how he could have done otherwise. His decision is couched in the following language:

"To summarize—It is found and I so declare:

"First—Recognition of the United Mine Workers of America is not to be compelled.

"Second—The day wage scale and subcontract system are to remain unchanged.

"Third—The existing methods of adjusting grievances are found to be fair and equitable.

"Fourth—The operators are under no obligation to re-employ the striking miners.

"Fifth—The freedom of contract shall be inviolate and, therefore, any of the above mentioned things may be done by mutual agreement of the parties.

"And I recommend:

"(a)—That the operators, as a means to promote peace and harmony, re-employ the unemployed men who struck as fast as places may be found for them without displacing men who are now at work.

"(b)—That the organization of United Mine Workers of America support the unemployed men who struck until they can find employment."

In considering Governor Kilby's final recommendation it must be borne in mind that the strike had its inception in the desire of the United Mine Workers of America to utilize those unfortunate Alabama miners who were members of the union in foisting upon that State another and illegal government, a government with extra-state jurisdiction and with extra-state allegiance. In other words, these Alabama miners were to violate their own State laws, in that they were to be loyal first to the United Mine Workers of America, and then to the State of Alabama, and Alabama's Governor was asked to ratify and approve such a proposal.

It will be well to bear this in mind, in the face of the fact



that now that the battle has been fought and lost by these dupes, the United Mine Workers of America announce that they will care for the strikers and their families by feeding and clothing them up to and including the week ending April 9, after which time the men and their families will be left to shift for themselves.

Small wonder that in commenting upon the union in another connection the Governor declares that even the written contract of the union is not to be relied upon.

In commenting upon the strike and the right by strikers to re-employment, Governor Kilby says:

"This strike, being called without just cause or for the purpose of remedying any grievance, and in deliberate violation of an agreement, was illegal and immoral. It proves without cavil that the written contract of the United Mine Workers of America cannot be relied upon, and that recognition would give no assurance of industrial peace. \* \* \* No permanent industrial relations can be built on an increasing suspicion between employers and employees, and any person or organization that seeks to create such hostility is engaged in an illegal and immoral work, and is a menace to industrial peace. \* \* \*

"The strikers need work, and they and their families will be left in sore straits without work, but in no worse condition than others would be in if discharged for their benefit, and so far as the public is concerned the conditions would not be remedied. They voluntarily, through the influence of union leaders, abandoned their work without just cause. It is my opinion that, since the strike was wrongfully and without the slightest justification called, the organization of United Mine Workers of America should support the present strikers until they are able to secure employment."

How the union views this rational suggestion is made clear above. If the leaders of the organization can cozen the miners of the South into pulling, or attempting to pull, their chestnuts from the fire, well and good, from the standpoint of the union. If, in the "pulling," the miner not only is burned in a financial way, but loses his position permanently, the union officials serenely pass the job of caring for the luckless victim over to the State whose law he violated and whose very Government he sought to overturn.

## PIG-IRON PRODUCTION AND ALABAMA'S PART IN IT.

THE American Iron and Steel Institute officially reports the production of pig-iron in the United States in 1920 at 36,925,987 gross tons, there having been produced 18,435,602 tons in the first half of the year and 18,490,385 tons in the second half.

The production in 1920 compares with an output of 31,015,364 tons in 1919 and an output of 39,434,797 tons in 1916, which was the record year for production, while the capacity now is about 45,000,000 tons. Thus the 1920 production was 19 per cent above that of the preceding year and 6½ per cent under the record production, while it was 82 per cent of the capacity.

Until the last four months of 1920 there was a very heavy demand for pig-iron, and the fact that production was so much under capacity was due entirely to there being physical difficulties in the way of operating the furnaces, these difficulties being chiefly of railroad origin. It was impossible to move full supplies of coke from the beehive regions and impossible fully to supply coal to the by-product ovens, which, with scarcely an exception, are located contiguous to the blast furnaces they serve. The scarcity of coke resulted in very high prices for it, Connellsville furnace coke during July and August frequently commanding \$18 per net ton at ovens, the same coke, only of poorer quality, as sold at \$1.50 in May, 1915. Extravagantly high costs and scarcity caused pig-iron to sell at prices higher than had been reached since Civil War times, except for a brief spell in 1917, before the Government

fixed prices as a war measure. The advance in prices culminated late in August, when foundry pig-iron sold at \$50 or more at Valley, Eastern Pennsylvania, Buffalo and Cleveland furnaces. The Chicago and Alabama furnaces could probably have secured \$50 also, but purposely held their prices down.

The average market price of pig-iron in 1920 was the highest for a calendar year since 1864, and yet the year was not a particularly profitable one for the merchant blast furnaces. The prices actually realized were far below the average quoted prices, because so much iron had been sold in 1919 at moderate prices for 1920 delivery, with further sales early in 1920 for delivery later in the year. In most cases the deliveries were delayed on account of poor furnace operation, and the high prices were paid largely by consumers who had to cke out their supplies by open-market purchases.

As to costs in making pig-iron in 1920, they were almost unbelievably high. An Eastern Pennsylvania furnace had the record in one month of paying more for its coke supply during the month than it received for all the pig-iron made in that month, and there may have been other cases. If the furnaces had merely had to pay high prices for coke, receiving full supplies of good quality, the matter would not have been so bad, but supplies were so uncertain that frequently a furnace alternated a few days in blast and a few days banked, while in not a few instances the coke was very poor, chiefly from over-burning in the ovens because railroad cars were not available for drawing the coke on time.

The production of foundry pig-iron and ferro-silicon in 1920 was 5,957,782 tons, or 16.1 per cent of the total make of pig-iron, the production of malleable pig-iron being 1,310,951 tons, or 3.6 per cent of the total. Thus the two grades used in iron foundries made up 19.7 per cent of the total pig-iron output. Foundry pig-iron is, however, the chief grade in the pig-iron market, for the reason that while the tonnages of Bessemer and basic grades made are much larger, they are made chiefly by steel works for their own consumption, and do not get into the market at all. Of 16,737,722 tons of basic pig-iron made in 1920, only 2,150,523 tons, or 15 per cent, was made for sale, while of 12,002,084 tons of Bessemer and low phosphorus iron, only 1,094,256 tons, or 10 per cent, was made for sale.

Nearly all the pig-iron produced for steel-making purposes was "direct furnace metal," i. e., was not allowed to cool, but was used direct from the blast furnace after passing through the metal mixer, in the Bessemer converters and open-hearth steel furnaces, the total of pig-iron furnished molten being 22,293,410 tons. A small part of this molten iron, however, did not go directly for steel-making, but was employed in casting ingot molds.

### Alabama's Position.

In October, 1890, the Iron and Steel Institute (British) held its memorable meeting in the United States, in Pittsburgh. On that occasion Sir Lowthian Bell said:

"I will not say that Birmingham will furnish the world with iron, but I will say that she will eventually dictate to the world what the price of iron shall be."

Sir Lowthian had all the known facts as to the Birmingham and other districts in his favor when he made that prediction, but certain things went against him. Alabama in 1890 produced 8.9 per cent of the 9,202,703 tons of pig-iron produced in the United States as a whole, which was a very good beginning. After the formal meeting of the Institute the British and other visitors toured the United States. They were in the Lake Superior iron-ore region from October 15 to 18, 1890, and saw what seemed like a wonderful iron-ore region, though not to be compared with Alabama for making cheap pig-iron, since the furnaces for utilizing the ore were mostly a thousand miles away, while in Alabama the ore, coking coal and furnaces were all close together. No sooner, however, had the

Britishers left the United States than Alfred and Leonidas Merritt, on November 16, 1890, discovered the great Missabe iron-ore range. There were vast quantities of rich ore, between 60 and 70 per cent in iron, natural state, literally under the roots of the grass. Lake Superior iron ore became truly "as cheap as dirt," and merely had to be transported. By refinements in Lake transportation, and, indeed, all along the line, for the North was able to command capital, it came about that Northern pig-iron was produced very cheaply. At the time of Sir Lowthian Bell's prediction pig-iron was selling at slightly over \$10 at furnace, but in 1897 foundry pig-iron sold at \$8 and Bessemer iron at \$9 at Mahoning and Shenango Valley furnaces.

The discovery of the Missabe range greatly altered Birmingham's competitive position, because there was almost no mining cost for the Missabe ore. The other Lake Superior ore ranges get their ore by underground mining, while Missabe was a steam-shovel proposition. Gradually the situation has altered in this respect. From its opening, in 1892, to January 1, 1920, the Missabe range has produced 520,686,631 tons of iron ore. That means that the cream of the deposits in rich ores has been taken, and it also means that practically all the ore lying near the surface has been used. The normal mining now is by extensive stripping operations, it being considered feasible in some cases to strip two feet of overburden to every foot of ore that is to be uncovered, and there are even underground workings. Thus the Missabe range's competition with Alabama is not as sharp today as it was 20 years ago.

Then there is the matter of freights, which, as noted in a recent issue of the MANUFACTURERS RECORD, bear more heavily upon the Northern furnaces than the Birmingham furnaces as the general level has advanced.

The Birmingham operators have difficulties, particularly in the matter of labor. Their wage cost in producing the raw materials and in operating the blast furnaces has increased since 1915 by a larger percentage than have wage costs in the North, and the discount in actual rates that used to offset this largely or wholly has almost disappeared. Yet Alabama has not done so badly. In 1920 the State produced 2,392,962 tons of pig-iron, or 193 per cent more than in 1890. The Alabama production practically tripled in thirty years, but the production of the whole country quadrupled, increasing from 9,202,703 tons in 1890 to 36,925,987 tons in 1920, and thus Alabama's proportion decreased from 8.9 per cent in 1890 to 6.5 per cent in 1920.

The production of pig-iron in the United States for January was at the rate of about 29,000,000 tons a year; for February, 25,000,000 tons; for March, 21,000,000 tons. The actual production in three months was about 6,100,000 gross tons, or an average rate of a trifle under 25,000,000 tons a year. April will start with a rate under 20,000,000 tons.

What will be Alabama's place in future? The total ore reserves are vastly greater than those of the Lake Superior region, but the ore is harder and harder to get at, requiring more labor and more machinery. The possibilities are there, the future depending upon the command of capital and efficient labor.

## THE SPIRIT THAT MUST BE BORN AGAIN IN AMERICA AND IN EUROPE.

THE MANUFACTURERS RECORD has repeatedly said that there is no part of Europe except Russia, perhaps, where there is such poverty and suffering as prevailed in the South after the Civil War. While the Civil War nominally ended in 1865, reconstruction lasted ten years longer, and that period was worse than war itself. It did more to demoralize the

South; more to drive hundreds of thousands of the best people out of the South, and more to endanger Anglo-Saxon civilization than the war itself.

We would not for a moment minimize the sufferings in parts of Europe, but when Europe will settle down to work as vigorously as the South did after 1865, it can rebuild its fortunes to very much better advantage than the South could. The South was without banking facilities, it had the horrors of reconstruction for ten years with Bolsheviks, or those who represented the Bolshevik element of today, dominating the whole legislative work of the South through the power of the negro vote, which they controlled. They had poured into the South as carpet-baggers just as the Bolshevik element poured from this land and others into Russia. The situation was such that their domination of the South was aided by the unfortunate upholding of that element by the Federal Government, which, by reason of the death of Lincoln and the power of one or two unscrupulous scoundrels then in control in Washington, held the South in subjection to the Bolsheviks and the negroes under them.

No pen has ever fully told the story of the desperate poverty of the South at that time. But something of the condition then existing in South Carolina, typical of what existed over the entire South, is given in an article in the Charleston News and Courier, which is as follows:

"A Charleston man talking hard times made the mistake of saying that things were worse now than they ever had been before, even in the days just following the Civil War. It was a mistake because among those to whom he made this remark was a Charleston woman who had lived through those days, and she instantly protested the statement.

"In the next five minutes she had swiftly sketched a picture of the conditions which existed in this section 55 years ago which convinced the first speaker and everyone else present that the difficulties through which we are now passing are light indeed compared with those through which the generation which came out of that other war had to pass.

"For five years after Appomattox a new dress in the South was an event. In the first year of that peace there were hundreds of families in Charleston which never knew what it was to have meat on the table; homes whose inmates in other days had enjoyed every comfort. The leaves of wild violets were gathered for miles around for greens; children went along ditch banks digging Indian potatoes, which were cooked and eaten with relish.

"How many South Carolinians of today know the story of 'Fighting Dick' Anderson? He was the ranking officer in the Confederate army from this State and one of General Lee's most trusted friends and lieutenants. His family had been people of wealth, and for 20 years before the Civil War he had been in the United States Army. When the war ended he tried to farm and failed and, coming to Charleston, got work as a day-laborer in the yards of the South Carolina Railroad.

"At the same time General Stephen Elliott, the hero of Fort Sumter, was earning a living for himself and his family by catching fish and selling them at Hilton Head to the Federal garrison. The house he occupied was a rude fishing shack in sight of his ancestral home.

"All over South Carolina, all over the South, this is the sort of thing that was going on, and the poverty which prevailed was the least of the general afflictions. Worse than the privations to which the people were subjected were the fears and anxieties and humiliations which they were compelled to experience. They lived through it, overcame everything, regained all that they had lost and more.

"The same spirit can put the South on its feet now and keep it there."

On the water courses of Virginia, men who had been leaders in the army and in society, professional men of high standing and others, spent winter after winter in bitter freezing weather oystering in small canoes often with their clothes frozen stiff, selling their catch to oyster boats which ran to Baltimore. The writer has some vivid recollections of seeing men of the highest educational and professional standing catching oysters day after day through the winter in order to earn a scanty living for their families. It was that spirit which saved the South after 1865.

## Nearly \$32,000,000 in Southern Construction Activities for Week of March 25

The summary of contracts awarded and initial announcements regarding construction projects for which the contracts will shortly be awarded, as reported in the construction columns of the MANUFACTURERS RECORD for the week ending March 25, involve the ultimate expenditure of approximately \$31,781,582, compared with the total for the preceding week, involving the total estimated expenditure of \$25,586,062. The amount involved in contracts awarded during the week is \$7,121,496, compared with the total for the preceding week of \$5,264,562, and for the week before that of \$6,766,270. Contracts to be awarded for construction projects of every character represent an expenditure totaling \$24,660,086.

The large sum of money represented by contracts actually awarded during the week gives a clear indication of the great amount of construction work that is getting under way, and within the next few weeks this total will be swelled by the awarding of contracts for many projects for which bids have been asked on and around the first of April.

The biggest gain over the previous week's summary was in the classification of roads, paving and bridges, which involve the expenditure of \$2,795,133 in contracts awarded, and \$8,246,027 in announcements of new projects for which plans have been prepared and for which bids will be asked in the near future. The total of contracts awarded contains a large number of road-building projects in Maryland on which work will now commence. Owing to the recent high costs of road-building materials and labor, the State of Maryland has done only such road work as was considered absolutely necessary. But with the recent cut in prices of materials of all kinds, and the decreased cost of labor and its increased efficiency, there has resulted a resumption of road work in the State. Similarly, many projects on which work was started several years ago and then stopped for various reasons is being resumed, and before many months a road-building program of considerable magnitude will be under way in Maryland. In the vicinity of Glasgow, Ky., road work involving a total expenditure of \$469,000 will be started shortly, and similar work will be undertaken near Tupelo, Miss., at a cost of \$320,000. Road work near Amarillo, Tex., will necessitate an expenditure of \$519,000.

The amount of money available for good roads work throughout the Southern States continues to increase each week, as new bond issues are voted in the various localities. For instance, in the vicinity of Greensboro, N. C., \$2,000,000 will be ultimately expended in good roads work, while near El Paso, Tex., \$2,500,000 will be the cost of similar work. Around Huntington, W. Va., \$750,000 will be spent, and in the vicinity of Greenville, N. C., \$500,000 will be involved in the completion of the road-building program.

The contracts awarded for road work for the week ending March 18 involved the expenditure of approximately \$791,995, while contracts to be awarded represented an estimated expenditure of \$3,723,000.

Contracts awarded for erection of school buildings for the week total \$933,437, as compared with \$555,867 for the preceding week, while the announcements of new projects for which plans have been prepared and for which bids will be asked in the near future represent a total investment of \$3,579,437, as compared with \$6,280,000 for the preceding week, which total included \$4,000,000 voted at Atlanta, Ga., for improvements to the public school system. At Ayden, S. C., \$400,000 will be expended in erection of school buildings and necessary similar improvements, and at St. Martinsville, La., \$300,000 will be expended. Similarly contracts were awarded at Emma, N. C.; Pensacola, Fla.; Galesville, Tex.; Tampa, Fla., and Belzoni, Miss.

Twenty-six separate school building projects were announced during the week for which bids will be asked shortly. They are scattered through the States of North Carolina, Mississippi, Florida, Texas, Georgia, Missouri, Virginia, Tennessee, South Carolina and Oklahoma.

The construction of buildings for association and fraternal organizations, announced as awarded during the week, will neces-

sitate the expenditure of \$111,000, compared with \$80,000 for the preceding week. Contracts to be awarded for such construction means the ultimate expenditure of \$1,305,000.

The number of miscellaneous enterprises for which contracts were awarded during the week, estimated to cost \$915,000, and those to be awarded, costing \$6,104,900, clearly demonstrate the widespread character of the construction activity. The largest single project of this character for which the contract was awarded was for a theater at Danville, Va., to cost \$250,000, and an exhibition building at Louisville, Ky., costing a similar amount. The next largest item was for a cold-storage plant at Charleston, S. C., to cost \$85,000.

Similarly, the contracts to be awarded for miscellaneous enterprises involve 37 different projects, involving the expenditure of from \$9000 to \$2,000,000 each. These include several theaters, a hydro-electric plant, a number of warehouses, telephone facility improvements, factories of various kinds, garages, incinerators, a textile mill, a cotton gin, and similar projects.

### SUMMARY FOR THE WEEK.

	Contracts to be awarded.	Contracts awarded.
Dwellings .....	\$342,100	\$156,775
Apartment-houses and hotels.....	2,337,000	589,000
Bank and office buildings.....	229,000	200,000
Church buildings.....	760,000	376,500
School buildings.....	3,579,437	933,437
Store buildings.....	643,600	52,000
Association and fraternal.....	1,305,000	111,000
Roads, paving and bridges.....	8,246,027	2,795,133
City and county projects.....	568,000	187,045
Sewers, drainage and water-works.....	545,022	806,556
Miscellaneous enterprises.....	6,104,900	915,050
Total .....	\$24,660,086	\$7,121,496

### CONTRACTS AWARDED.

Dwellings—		Roads, Paving and Bridges—	
Norfolk, Va.....	\$15,000	Glasgow, Ky.....	\$469,000
Norfolk, Va.....	14,000	Williamstown, Ky.....	174,000
Norfolk, Va.....	11,000	Jackson, Miss.....	45,000
Virginia Beach, Va.....	13,775	Fort Worth, Tex.....	90,000
Huntington, W. Va.....	10,000	Belair, Md.....	76,450
Ocala, Fla.....	10,000	Denton, Md.....	78,496
Baltimore, Md.....	18,000	Easton, Md.....	96,954
Jacksonville, Fla.....	25,000	Salisbury, Md.....	50,000
Baltimore, Md.....	40,000	Snow Hill, Md.....	133,312
	\$156,775	Pensacola, Fla.....	20,000
Apartment-houses and Hotels—		Tupelo, Miss.....	320,000
Miami, Fla.....	\$500,000	Weleetka, Okla.....	50,000
Norfolk, Va.....	25,000	Columbia, S. C.....	67,341
Vero, Fla.....	15,000	Clendenin, W. Va.....	35,000
Miami, Fla.....	35,000	Moundsville, W. Va.....	175,000
New Orleans, La.....	14,000	Weston, W. Va.....	60,000
	\$589,000	Amarillo, Tex.....	519,000
Bank and Office Buildings—		McKenney, Tex.....	5,000
Baltimore, Md.....	\$200,000	Ringgold, Ga.....	75,000
	\$200,000	Hattiesburg, Miss.....	25,000
Church Buildings—		Baltimore, Md.....	100,000
McComb, Miss.....	\$75,000	Frederick, Md.....	50,589
Barbourville, Ky.....	40,000	Springfield, Mo.....	80,000
Blackville, S. C.....	50,000		\$2,795,133
Clover, S. C.....	40,000	City and County Projects—	
Blackville, S. C.....	32,000	Johnson City, Tenn.....	\$63,500
Opelika, Ala.....	22,000	Panama City, Fla.....	87,200
Santa Anna, Tex.....	60,000	Arlington, Va.....	12,000
Tampa, Fla.....	17,500	Corpus Christi, Tex.....	24,705
Santa Anna, Tex.....	40,000		\$187,405
	\$376,500	Sewers, Drainage and Water-works—	
School Buildings—		Pensacola, Fla.....	\$23,000
St. Martinsville, La.....	\$300,000	Birmingham, Ala.....	200,000
Emma, N. C.....	35,000	Brunswick, Ga.....	126,000
Ayden, S. C.....	400,000	Moberly, Mo.....	350,000
Pensacola, Fla.....	96,437	Baltimore, Md.....	7,000
Galesville, Tex.....	10,000	Gastonia, N. C.....	91,000
Belzoni, Miss.....	62,000	Ponca City, Okla.....	8,556
Tampa, Fla.....	30,000		\$805,556
	\$933,437	Miscellaneous Enterprises—	
Store Buildings—		San Antonio, Tex., canning plant.....	\$39,770
Tampa, Fla.....	\$30,000	Tampa, Fla., warehouse.....	20,000
Potomac, Va.....	10,000	Charleston, S. C., cold-storage plant.....	85,000
Bentonville, Ark.....	12,000	Homestead, Fla., plant.....	6,000
	\$52,000	Chattanooga, Tenn., warehouse.....	40,000
Association and Fraternal—		Pascagoula, Miss., electric plant.....	61,600
Spartanburg, S. C.....	\$32,000	Gulfport, Miss., wharf.....	12,680
Louisville, Ky.....	25,000	Baltimore, Md., garage.....	15,000
Richmond, Va.....	22,000	St. Louis, Mo., foundry.....	30,000
Richmond, Va.....	32,000	Statesville, N. C., textile mill.....	25,000
	\$111,000		



Baltimore, Md, machine shop	10,000
Jacksonville, Fla, garage	10,000
Louisville, Ky., exhibition building	250,000
Dallas, Tex.	40,000

Jacksonville, Fla., rail-road station	20,000
Danville, Va., theater	250,000
	\$915,050

## CONTRACTS TO BE AWARDED

Dwellings—	
Johnson City, Tenn.	\$30,000
San Antonio, Tex.	31,200
Tulsa, Okla.	46,500
Jacksonville, Fla.	35,000
Louisville, Ky.	10,000
Springfield, Mo.	13,000
Charlotte, N. C.	24,000
San Antonio, Tex.	13,400
Huntington, W. Va.	20,000
Hazard, Ky.	20,000
Joplin, Mo.	25,000
Charleston, W. Va.	12,000
Louisville, Ky.	22,000
Fort Worth, Tex.	40,000

\$342,100

Apartment-houses and Hotels—	
St. Petersburg, Fla.	\$15,000
Miami, Fla.	51,000
Norfolk, Va.	10,000
Greenville, S. C.	50,000
Charlotte, N. C.	15,000
Tulsa, Okla.	150,000
Graham, Tex.	225,000
Charlotte, N. C.	1,000,000
Houston, Tex.	10,000
Pensacola, Fla.	500,000
Dallas, Tex.	12,000
Morgantown, W. Va.	300,000

\$2,337,000

Bank and Office Buildings—	
St. Louis, Mo.	\$65,000
Raleigh, N. C.	75,000
Gretna, Va.	14,000
Keyser, W. Va.	75,000

\$229,000

Church Buildings—	
Atlanta, Ga.	\$20,000
Lockhart, S. C.	20,000
Richmond, Va.	45,000
Tuscaloosa, Ala.	150,000
Roncovate, W. Va.	30,000
Lubbock, Tex.	60,000
Ronovoke, Va.	35,000
Alderson, W. Va.	25,000
Norfolk, Va.	50,000
Gadsden, Ala.	25,000
Winston-Salem, N. C.	30,000
Birmingham, Ala.	125,000
Baltimore, Md.	70,000
Greensboro, N. C.	75,000

\$760,000

School Buildings—	
Miami, Fla.	\$300,000
Perrine, Fla.	10,000
Jackson, Miss.	70,000
Calypso, N. C.	50,000
Bristol, Tenn.	20,000
Huntsville, Tex.	100,000
Blountstown, Fla.	32,000
Campbelltown, Fla.	16,000
Malone, Fla.	15,000
Pensacola, Fla.	96,437
Selma, N. C.	175,000
Floydada, Tex.	90,000
White Stone, Va.	20,000
Scotland, La.	70,000
Columbia, S. C.	300,000
Saltillo, Tex.	500,000
Arlington, Fla.	20,000
Columbus, Ga.	150,000
Durham, N. C.	600,000
Fairfax, Okla.	50,000
Charlottesville, Va.	175,000
Pearisburg, Va.	15,000
Grandview, Mo.	75,000
Willard, Mo.	30,000
Wadesboro, N. C.	90,000
Austin, Tex.	500,000

\$3,579,437

Store Buildings—	
Miami, Fla.	\$17,000
Kansas City, Mo.	35,000
Yokum, Tex.	10,000
Jacksonville, Fla.	200,000
Jacksonville, Fla.	300,000
Houston, Tex.	38,600
Kingsfisher, Okla.	15,000
Dallas, Tex.	28,000

\$613,600

Association and Fraternal—	
Kansas City, Mo.	\$750,000
Payetteville, N. C.	50,000
Charleston, W. Va.	100,000
Jacksonville, Fla.	25,000
Louisville, Ky.	25,000
Monroe, La.	75,000
College Station, Tex.	150,000
San Antonio, Tex.	125,000
Springfield, Mo.	5,000

\$1,305,000

Roads, Paving and Bridges—	
Cedartown, Ga.	\$400,000
Greensboro, N. C.	2,000,000
Orangeburg, S. C.	300,000
El Paso, Tex.	2,500,000
Huntington, W. Va.	750,000
Brady, Tex.	11,318
Dangerfield, Tex.	37,419
Jasper, Tex.	134,156
La Grange, Tex.	123,365
San Augustine, Tex.	150,000
Durham, N. C.	300,000
St. George, S. C.	82,768
Lenoir City, Tenn.	130,000
Texarkana, Tex.	300,000
Little Rock, Ark.	51,000
Greenville, N. C.	500,000
Waynesville, N. C.	100,000
Wilkesboro, N. C.	275,000
Jasper, Tex.	100,000

\$8,246,927

City and County Projects—	
Cherokee, Okla.	\$125,000
Baltimore, Md.	28,000
Houston, Tex.	80,000
Roanoke, Va.	100,000
Randeman, N. C.	10,000
Graham, N. C.	200,000
Leesburg, Va.	25,000

\$568,000

Sewer, Drainage and Water-works—	
West Palm Beach, Fla.	\$100,000
Bainbridge, Ga.	20,000
Brookfield, Mo.	140,000
Fort Pierce, Fla.	20,000
Norfolk, Va.	100,000
Dallas, Tex.	10,022
Mocksville, N. C.	55,000
Greenville, Tex.	100,000

\$545,022

Miscellaneous Enterprises—	
Memphis, Tenn., electric plant	2,000,000
Crystal Springs, Miss., ice plant	60,000
Tulsa, Okla., chemical plant	400,000
Miami, Fla., telephone improvements	700,000
Meridian, Miss., telephone improvements	35,000
Nashville, Tenn., warehouse	15,000
Fort Pierce, Fla., electric-light plant	60,000
Dallas, Tex., garage	14,500
Charlotte, N. C., textile mill	85,000
Marble Falls, Tex., cotton gin	20,000
Louisville, Ky., metal plant	46,400
Jacksonville, Fla., garage	400,000
Louisville, Ky., stock-yards	10,000
Catonsville, Md., orphanage	250,000
Ashland, Ky., theater	100,000
Baltimore, Md., theater	175,000
Baltimore, Md., oil plant	25,000
St. Louis, Mo., incinerator	175,000
Springfield, Mo., garage	9,000
Tampa, Fla., warehouse	\$15,000
Okmulgee, Okla., warehouse	75,000
Baltimore, Md., mattress plant	100,000
St. Louis, Mo., garage	200,000
Greensboro, N. C., hospital	130,000
Jacksonville, Fla., stable	10,000
Lyndon, Ky., children's home	300,000
St. Louis, Mo., theater	80,000
Wellston, Mo., theater	65,000
Tarboro, N. C., theater	15,000
St. Louis, Mo., warehouse	300,000
San Antonio, Tex., factory	25,000
San Antonio, Tex., land development	75,000
Charlotte, N. C., swimming pool	15,000
Louisville, Ky., dairy	30,000
Jacksonville, Fla., coffee plant	58,000
Hamlet, N. C., pine-products plant	25,000
Vernon, Tex., garage	15,000

\$6,104,300

## INCREASE IN SOUTHERN BUILDING VERY MARKED.

A Total of \$17,093,483 Represented in Building Permits in 45 Cities for Month of February as Compared With \$12,243,478 for January.

A very pronounced increase in Southern building construction is indicated by the figures for building permits issued in various leading cities during February, compared with those issued in the same cities during the first month of the new year. This comparison shows that the amount of money involved in the completion of construction projects for which permits were issued during February, for 45 cities, is \$17,093,483, while the total for these cities in January was \$12,243,478.

Baltimore building permits, as represented by the total involved, increased from \$1,737,240 in January, to \$4,086,640 in February. Similarly, Dallas, Tex., increased to \$1,269,710 from \$589,808. The valuation of construction work in New Orleans increased to \$819,056 in February, from \$243,361 for the preceding month. Increased valuation was shown over January in Birmingham, Ala.; Little Rock, Ark.; Jacksonville, Tampa and Pensacola, Fla.; Savannah, Augusta and Macon, Ga.; Covington, Ky.; Cumberland, Md.; Springfield and St. Louis, Mo.; Winston-Salem, Asheville, Charlotte and Wilmington, N. C.; Norman and Okmulgee, Okla.; Charleston, Columbia and Greenville, S. C.; Knoxville and Chattanooga, Tenn.; Galveston, Waco and El Paso, Tex.; Norfolk and Richmond, Va.; Charleston, Wheeling and Huntington, W. Va.

The figures are as follows:

## BUILDING PERMITS STATISTICS—MONTH OF FEBRUARY.

	No. of Permits	Estimated cost.
Birmingham, Ala.	502	\$462,320
Little Rock, Ark.	173	185,070
Washington, D. C.	450	626,026
Jacksonville, Fla.	246	488,417
Miami, Fla.	156	199,700
Pensacola, Fla.	78	304,779
Tampa, Fla.	117	287,555
Atlanta, Ga.	223	553,623
Augusta, Ga.	121	49,336
Macon, Ga.	62	113,824
Savannah, Ga.	59	85,480
Covington, Ky.	31	40,400
Louisville, Ky.	153	404,560
New Orleans, La.	174	819,056
Shreveport, La.	209	220,195
Baltimore, Md.	858	4,086,640
Cumberland, Md.	23	25,400
Kansas City, Mo.	211	598,500
Springfield, Mo.	64	34,550
St. Joseph, Mo.	46	44,300
St. Louis, Mo.	614	714,845
Durham, N. C.	54	89,286
Charlotte, N. C.	35	178,900
High Point, N. C.	14	24,600
Winston-Salem, N. C.	43	27,225
Wilmington, N. C.	65	168,842
Tulsa, Okla.	171	655,150
Muskogee, Okla.	11	15,210
Okmulgee, Okla.	44	219,550
Enid, Okla.	32	96,125
Charleston, S. C.	48	216,908
Columbia, S. C.	79	82,915
Greenville, S. C.	59	85,285
Chattanooga, Tenn.	164	419,947
Knoxville, Tenn.	73	221,981
Nashville, Tenn.	233	130,963
Dallas, Tex.	338	1,269,710
El Paso, Tex.	97	239,535
Fort Worth, Tex.	89	253,335
Galveston, Tex.	362	150,487
Houston, Tex.	476	150,273
Norfolk, Va.	62	420,444
Richmond, Va.	130	647,616
Charleston, W. Va.	82	256,907
Huntington, W. Va.	97	477,558
Wheeling, W. Va.	67	71,175

Birmingham, Ala.—February, 501, \$462,320; January, 318, \$280,533; February, 1920, 278, \$234,300. Frame and brick dwellings, 110, \$261,773; frame dwelling repairs, 317, \$58,230; 5 elevators, \$100,000.

Little Rock, Ark.—February, 173, \$185,070; January, 150, \$176,170; new work, 46, \$112,200; repairs, 127, \$72,870; 45 residences, \$111,000; 1 garage, \$1200; 27 repairs to business houses, \$22,520; 100 repairs to residences, \$50,350.

Washington, D. C.—February, 450, \$626,026; January, 333, \$974,085; 111 repairs to brick buildings, \$150,266; 18 brick dwellings, \$162,700; 54 brick garages, \$43,615; 2 apartment-houses, \$80,000; 6 stores, \$25,000; 8 frame dwellings, \$46,000; 9 elevators, \$38,350, etc.

Jacksonville, Fla.—February, 246, \$488,417; January, 227, \$481,202; 38 dwellings, \$126,800; 10 garages, \$6000; viaduct, \$290,000, etc.



Tampa, Fla.—February, 117, \$287,355; January, 96, \$97,975; February, 1920, 78 permits, \$82,155; 52, new work, \$186,070; 65, repair work, \$101,285; 21 residences, \$63,050; apartments, \$30,000; two warehouses, \$30,000; brick store, \$25,000; 56 frame repairs, \$17,519; 9 brick repairs, \$83,775.

Miami, Fla.—February, 156, \$199,700; January, 221, \$229,700; 109, new work, \$185,000; 47, repairs, \$16,100, etc.

Pensacola, Fla.—February, 78, \$304,779; January, 95, \$59,600; 7 new buildings inside fire limits, \$279,050; 14 repairs brick buildings, \$13,500, etc.

Atlanta, Ga.—February, 223, \$553,623; January, 189, \$586,909; 73, new work, \$408,900; 150, repair work, \$144,723; 57 frame dwellings, \$239,500; apartment-house, \$11,000; two factories, \$27,000; 8 brick business houses, \$122,500; 35 miscellaneous construction, \$17,160; 133 alterations and repairs, \$126,978.

Savannah, Ga.—February, 50, \$85,430; January, 42, \$62,075; 33, new work, \$72,559; 17, repairs, \$12,880.

Brunswick, Ga.—February, 26, \$6570; 8, new work, \$2925; 18, repairs, \$3645.

Augusta, Ga.—February, 121, \$49,336; January, 114, \$46,540.

Macon, Ga.—February, 62, \$113,824; January, 44, \$21,638.

Louisville, Ky.—February, 153, \$404,950; January, 106, \$611,500; church, \$150,000; 3 factories, \$11,000; 22 frame dwellings, \$100,000; 4 stores, \$52,000; 6 warehouses, \$30,800, etc.

Covington, Ky.—February, 31, \$40,400; January, 25, \$21,300; 11, new work, \$28,600; 20, repairs, \$11,800.

Lexington, Ky.—February, 30, \$19,090; January, 18, \$59,395.

New Orleans, La.—February, 174, \$819,056; January, 119, \$243,361; 61 residences, \$172,500; 21 additions, \$27,750; 28 repairs, \$33,395; 14 garages, \$230; 10 remodeling, \$16,275; apartment, \$400,000; dormitory, \$27,000; 5 alterations, \$54,476.

Shreveport, La.—February, 209, \$220,195; January, 211, \$249,400.

Baltimore, Md.—February, 858, \$4,086,640; January, \$1,737,240; new improvements, \$1,537,850; 651 alterations, \$196,306; 117 additions, \$451,800; ten 2-story brick dwellings, \$30,000; seventeen 2-story frame buildings, \$80,000; 15-story office building for Standard Oil Co., \$1,500,000; 2-story clubhouse, \$100,000; 56 garages.

Cumberland, Md.—February, 23, \$25,400; January, 12, \$14,145.

Springfield, Mo.—February, 64, \$34,350; January, 35, \$26,665.

St. Louis, Mo.—February, 614, \$714,845; January, 444, \$333,025; 325, new work, \$561,330; 326, repairs, \$152,915.

Winston-Salem, N. C.—February, 65, \$168,943; January, 43, \$27,225; 31, new work, \$115,555; 34, repairs, \$13,268.

Asheville, N. C.—February, 54, \$59,280; January, 42, \$63,810; 24, new work, \$63,225; 30, repairs, \$26,055.

Durham, N. C.—February 6, \$12,050; 4, new work, \$10,800; 2, repairs, \$1250.

High Point, N. C.—February, 14, \$24,600; January, 3, \$23,300; 10, new work, \$20,750; 4, repairs, \$3850.

Charlotte, N. C.—February, 35, \$178,900; January, 33, \$127,825; Sunday-school addition, \$70,000; school addition, \$10,000; frame church, \$30,000; brick warehouse, \$18,000, etc.

Wilmington, N. C.—February, 15, \$35,300; January, 14, \$15,550; 8 frame dwellings, \$17,000; repairs to apartment-house, \$10,000, etc.

Norman, Okla.—February and January, 22, \$80,700; 20 residences, \$76,200; business house, \$4000; garage, \$500.

Tulsa, Okla.—February, 171, \$644,150; January, 127, \$736,400.

Muskogee, Okla.—February, 11, \$15,310; January, 13, \$19,550; 4 residences, 2 garages, etc.

Okmulgee, Okla.—February, 44, \$219,850; January, 36, \$68,000.

Enid, Okla.—February, 32, \$86,125.

Charleston, S. C.—February, 48, \$216,906; January, 29, \$46,925.

Columbia, S. C.—February, 79, \$82,915; January, 20, \$71,050; 12 dwellings, \$40,000; 2 garages, \$15,350; 2 stores, \$6500; 63 miscellaneous permits, \$21,065.

Greenville, S. C.—February, 59, \$85,285; January, 52, \$69,875.

Knoxville, Tenn.—February, 73, \$221,981; January, 60, \$50,706; 3 stores, \$22,500; factory, \$156,250; 17 frame dwellings, \$30,725, etc.

Chattanooga, Tenn.—February, 164, \$419,947; January, 128, \$416,139.

Dallas, Tex.—February, 338, \$1,269,710; January, 275, \$589,080.

Houston, Tex.—February, 476, \$501,273; January, 409, \$393,364; 163 residences, \$328,549; 15 apartment-houses, \$42,200; 17 factories and warehouses, \$41,435; 161 permits for new work, \$412,184; 315, for repairs, \$80,089.

Galveston, Tex.—February, 362, \$133,487; January, 390, \$62,836; 49 frame buildings, garages, etc., \$19,395; 29 fire-resisting buildings, \$81,820, etc.

Fort Worth, Tex.—February, 143, \$256,355; January, 132, \$316,760.

Beaumont, Tex.—February, 161, \$83,575; January, 171, \$101,788.

Waco, Tex.—February, 29, \$49,170; January, 20, \$40,851.

El Paso, Tex.—February, 97, \$239,595; January, 96, \$114,962.

Norfolk, Va.—February, 62, \$420,444; January, 54, \$119,720; school, \$70,691; assembly hall, \$62,000; public utility improvements, \$25,000; 3 stores, \$175,000; 7 dwellings, \$30,888.

Richmond, Va.—February, 120, \$647,616; January, 93, \$322,495; 68 new buildings, \$455,464; 75 repairs, \$192,132; 8 brick dwellings, \$56,000; 7 frame dwellings, \$31,000; 2 apartment-houses, \$275,000; 3 manufactories, \$63,000, etc.

Charleston, W. Va.—February, 82, \$256,907; January, 39, \$46,965.

Wheeling, W. Va.—February, 67, \$71,175; January, 38, \$19,740; 37, new work, \$62,595; 37, repairs, \$8580.

Huntington, W. Va.—February, 97, \$477,458; January, 69, \$128,330.

## American Dye Industry Is Key to National Defense.

Bearing the title "World Disarmament and the Master Key Industry," a booklet has been issued by the American Dyes Institute, 130 West 42d street, New York, in which is presented a graphic portrayal of the dyes industry as "the keystone of our arch of national defense and future industrial independence in all its peaceful majesty."

Premising the argument with the story of the position of Germany as a result of her development in dye-chemistry, it is declared that no nation can disarm, to any serious extent, unless it has such an industry. "The equipment and the knowledge necessary cannot be improvised nor even provided beforehand, specially for war purposes, and kept during peace unused. Inactive plants deteriorate, the indispensable trained employees cannot be kept available, and the advance of science is so rapid that no anticipation of the nation's needs can succeed.

"Today the United States, and perhaps the United States alone, has an organic chemical industry capable of offering the same military advantages as the German. In addition, while it survives, that industry guarantees the progress of chemical medicine, the advance of applied chemistry in every industrial field, and the independence of the huge industries whose essentials it supplies. For all these reasons it invites the certain and deadly attack of the gigantic German dye trust, which must monopolize our markets or cease to be Germany's most lucrative industry. This attack, driven home with true German ruthless unscrupulousness, has already begun and will annihilate the ordinary tariff defense, as the Trust's gases and high explosives annihilated their victims in the war, and nothing short of direct measures of exclusion can furnish the necessary shield. If Congress will furnish that defense, we have the prime essential, without which neither we nor the rest of the world can disarm. If the defense be denied, we shall leave ourselves helpless against the warfare of the future, and by the same denial strengthen the indestructible armament which, in the shape of Germany's dye industry, will make the Germans an incessant and continuous peril to the world."

The booklet summarizes the changes brought about by the World War in the methods of warfare; tells how Germany encircled her enemies by the dye industry, and presents arguments made by Dr. Charles H. Herty and Major V. Lefebure, together with statements from high officials of the Army and Navy and nationally known scientists, making clear the national need for the product of the experiments and research of dye chemists. Arguments in Congress over the passage of the dyestuffs bill are summarized, and the work concludes with exhaustive quotations from the press of the nation in support of the passage of the legislation to control the import of German-made dyes.

The work has been done in a masterly manner; the data supporting the argument well and carefully prepared and presented, and it would be difficult indeed for a fair-minded man to fail to see the need, after its perusal, for the enactment of legislation such as the Longworth bill; failing in which "we must either remain armed to the teeth or accept the certainty that we cannot resist an attack by any dye-making country."

### Special Hearings on Southern Tariff Issues Will Be Held.

Washington, March 28—[Special.]—Chairman Fordney has announced that he will call the House Ways and Means Committee in special session Wednesday, April 20, to hear representatives of the Southern Tariff Association present their tariff requirements and discuss national legislation desired by the South. John H. Kirby, president of the Southern Tariff Association, who has been in Washington for several days conferring with President Harding and other Administration leaders, has called a meeting of the directing heads of the 57 industries affiliated with his organization to meet here for a preliminary conference at the National Hotel Monday and Tuesday, April 18 and 19.

"At this conference we will correctly determine the attitude of the South on tariff legislation, and we will present our conclusion to the Congress of the United States through the Ways and Means Committee at its special session," Mr. Kirby said. "By that time we will have definite comments from the producing, consuming, political, commercial and distributing interests of the South as to the tariff requirements of our Southern agricultural, livestock, manufacturing and mining industries."

A series of meetings are to be held throughout the South prior to the Washington conference for the purpose of developing Southern sentiment on the tariff question. Governor Lee M. Russell of Mississippi, who is chairman of the Mississippi Division of the Southern Tariff Association, is arranging for a State-wide meeting in Jackson early in April, and similar conferences will be held in Texas, Arkansas, South Carolina, Georgia, Alabama and other States of the South.

### Graphite Production Shows Increase.

The quantity of domestic flake and amorphous graphite sold by producers in the United States in 1920 amounted to 9510 short tons, an increase of 28 per cent over the quantity sold in 1919.

The value of the graphite sold in 1920 was about \$626,201, as compared with \$778,857 in 1919. These figures are based on reports made by producers to the United States Geological Survey.

Operators in Colorado, Nevada and Rhode Island reported sales of 4694 short tons of amorphous graphite in 1920, at an average price of \$10.60 a ton. This was \$3.52 per ton less than the average price in 1919.

The sales of crystalline graphite in 1920 amounted to 9,632,360 pounds, valued at \$576,443, as compared with 8,086,191 pounds, valued at \$731,141 in 1919. The average price per pound in 1920 was 5.9 cents; in 1919 it was 9 cents.

Alabama led in the production of crystalline graphite, the sales in 1920 amounting to 4,894,648 pounds, or 51 per cent of the total quantity sold in the United States.

### \$800,000 Hotel Nearly Ready at Winston-Salem.

A large modern hotel costing \$800,000 has been practically completed at Winston-Salem, N. C., by the Winston-Salem Hotel Co. of that city. The building is of reinforced concrete construction, 117x144 feet, and was erected by the company under the supervision of Robert L. Acker. The roofing is of felt and asphalt, while the flooring is of marble, tile and cement finish. All contracts have been awarded for materials and equipment, the latter including a vacuum heating plant, equipped with two high pressure boilers, costing \$40,000 and three Otis elevators, costing \$30,000. Electricity for lighting will be secured from the municipal lighting system. Structural work has been finished, masonry is nearing completion, and the plumbing and heating system is practically installed. H. L. Stevens & Co., 522 Fifth avenue, New York, are the architects.

### Freight to Pacific by All-Water Route.

Huntington, W. Va., March 28—[Special.]—The first cargo of freight by an all-water route to the Pacific coast left Cincinnati on Monday, March 21, in the steamer Queen City, the boat having a cargo of 750 tons and a passenger list of 60. At New Orleans the freight will be transferred to ocean steamers for transshipment to the coast. It is claimed that there will be a big difference in the rate as between rail shipment and water shipment.

### Will the Warfield Plan Bring Relief to the Railroads?

Washington, March 28—[Special.]—S. Davies Warfield's proposed supplement to the Transportation Act of 1920, submitted by him to Chairman Cummins of the Senate Committee on Interstate Commerce, is variously viewed in Washington. Failure to, at the same time, make public the bill under which the National Railway Service is to function, causes those who are willing to give the basic idea underlying the whole plan a hearing to hesitate about expressing a frank opinion.

Those who favor the restoration of the statu quo ante in the railroad world; the elimination of the Adamson law, and its attendant queue of legislation, and who would let the railroads, free from Federal supervision and regulation, work out their salvation, are of course, quick to reject the scheme in its entirety.

On the other hand, there are many persons, railway officials and others, to whose mind the need for the creation of some such organization as is outlined by Mr. Warfield is necessary to make more workable the Interstate Commerce Commission. It is pointed out by them that the Commission, as at present constituted, has more than it really should have to do. The Commission, able as it is, is limited in the amount of work that can be performed. If Mr. Warfield's plan contemplates the creation of joint committees who, under the Interstate Commerce Commission, shall relieve that commission of detail work, giving it freedom to perform the functions for which it was designed, those functions being purely regulatory, then the idea or a similar one as to essentials will perform a needed duty, they declare.

If, on the other hand, the plan simply contemplates the creation of an additional commission, the authority of which is doubtful, and the results of whose work must be submitted finally to the Interstate Commerce Commission for revision, then there is simply piled Pelion upon Ossa in our commission regulation of transportation, and instead of gain we shall have further complication, delay and loss of efficiency generally.

Until Mr. Warfield's plan is clarified entirely by the making public of the text of the proposed bill covering the operations of the National Service scheme, even those who are not inclined to look askance at the fundamental idea of the bill are hesitant about expressing a conclusion as to its merits.

There is a clear-cut opinion here, however, that at its best, Mr. Warfield's plan is one that will require months to be put into working shape. The railroad situation, it is pointed out, is desperate, and one requiring immediate measures to avert a virtual disintegration of the transportation fabric, with receiverships in the immediate forefront and Federal ownership in the background. To avert this condition, it is urged that steps be taken immediately upon the convening of Congress in special session to have the Government underwrite railway securities on a long-term basis, guaranteeing that they obtain money at not more than 6 per cent interest for their rehabilitation, and that they be allowed to work out their salvation with the Government, to the interference of which in no small measure the present condition in railway affairs is due, aiding in all ways possible.

It will be remembered that at the time the Transportation Act was in preparation, the idea was existent, in some minds, that the present condition was inevitable. It was then urged upon the Congress that the so-called revolving fund for loan to the railroads be created without limitation instead of at the figure of \$300,000,000 which was set under that law, and it is believed by those who are proponents of the plan to enlarge this revolving fund now that by such action a tiding over of the present situation is possible.

Of course, it is essential that the national agreements will have to be so amended as to permit of the operating costs, and particularly the part that wages constitute in operating cost shall be restored to some rational proportion of the whole. When, out of every dollar of earnings, a railroad is paying 70 cents for wages, a condition has been reached that can result in nothing but disaster to the corporation wherein such conditions exist. The immediate need is for money, however, and when that condition has been met plans for rehabilitation of the whole railroad structure, in which admittedly there are grave faults at present, can be taken up and given a fairer and more constructive appraisal.

# Large Tobacco Plant Under Construction at Richmond

ONE UNIT NOW COMPLETE—SECOND UNIT BEGUN—PLANS CALL FOR STRUCTURE THAT WILL ULTIMATELY COVER ENTIRE BLOCK AND COST \$1,750,000.

[Special Correspondence Manufacturers Record.]

Richmond, Va., March 26.

New and novel features of construction and design, with a view to providing ideal working conditions for factory hands, are embodied in the plans for the large new plant being built here at the Allen & Ginter branch of the Liggett & Myers Tobacco Co. of New York. The plant will ultimately take in the entire block bounded by Canal, Cary, 6th and 7th streets. It will, when completed, cost approximately \$1,750,000, and provide employment for 2500 persons in manufacturing several billion cigarettes yearly.

The H. K. Ferguson Company of Cleveland, O., has the general contract for construction of the plant, after plans by Francisco & Jacobus, engineers and architects, New York and Chicago.

The company already has a large plant in operation on the site, and, in order to facilitate production, is erecting one new unit at a time. Accordingly, the first unit has been completed, and work has commenced on the second. Machinery is now being installed in the first unit, and manufacturing operations will begin within the next few weeks. Upon the completion of the second unit sufficient space will be provided to care for the machinery and office space in the original factory now in operation, and the construction of the third unit will begin.

The new plant is of reinforced concrete construction, with brick spandrel walls, steel sash and a composition roof over a concrete flat slab in places and tile in others.

The floors are of the beam and girder type construction, with columns 21 feet 9 inches by 21 feet 8 inches, and designed for a live load of 150 pounds per square foot. Spiral reinforcing is used in the columns and rods are used in the floors, all of which was furnished by the Truscon Steel Co. of Youngstown, O. In order to reduce vibration and noise throughout the building to a minimum, specially designed wood floors have been laid over the concrete floors in the manufacturing sections. These floors consist of a one-inch layer of thoroughly dried sand, over the concrete, and upon it is placed two-inch cypress boards, to which are nailed at an angle of 45 degrees one-inch tongue-and-groove maple floor. Thus, the wood floor, to which all motors and machinery are fastened, really "floats" upon the sand cushion and does not transmit noise or vibration as it would were the floor fastened to "sleepers" imbedded in the concrete. There is approximately

20,300 square feet of space on each floor of the first unit, which is five stories high, with basement beneath it. The ceilings are 16 feet high, and since every machine in the plant is operated by direct drive, there is no overhead transmission equipment. In fact, the only objects near the ceiling or attached to it are the



NEW UNIT OF ALLEN & GINTER BRANCH OF LIGGETT & MYERS TOBACCO CO., RICHMOND, VA.

electric-light reflectors and lines and the sprinkler-system equipment.

Light will be provided on all four sides of the plant when it is finally completed. As it is now, there is light on three sides, one end being closed in temporarily with hollow tile, pending the completion of the second unit, when this partition will be removed. Truscon daylight steel sash, made by the Truscon Steel Co. of Youngstown, O., is used throughout. The bottom panes of glass



THIS VIEW SHOWS THE PLANT AS IT WILL APPEAR WHEN ALL UNITS ARE COMPLETED. THE COST WILL BE AROUND \$1,750,000.



are plain, while the remainder is corrugated with the smooth side out and set with the corrugations horizontal to properly diffuse and evenly distribute the light.

In addition to the splendid lighting furnished by the abundance of glass space, the walls and the piping of the building are painted with Permanite Cold Water Paint, and Detroit Graphite Dado, made by M. Ewing Fox, New York city, and Detroit Graphite Co., Detroit, Mich., respectively. Besides, artificial lighting is provided in each bay by two 150-watt electric lamps in Ivanhoe Regent reflectors, made by the General Electric Co., the two lamps being placed perpendicular to each other in every other bay.

An elaborate and complete Grinnell sprinkler system is being installed, made by the Grinnell Company, Inc., of Providence, R. I. The heads are being placed on 10-foot 2 inch centers. The feed pipes are run through holes left purposely in the beams of the floor. Water for the system is supplied by a steel tank and tower placed on the roof of the building. The tank, which was built and installed by the Pittsburgh-Des Moines Steel Co. of Pittsburgh, Pa., is 35 feet above the roof, being placed upon a steel tower, and is of 30,000 gallons capacity. It is so built that the standpipe runs about two-thirds of the distance from the bottom to the top of the tank, while a second pipe utilizes the remaining water. The bottom two-thirds is used for the sprinkler system exclusively, while the remainder is used for domestic water consumption.

On each floor are two toilets, with steel partitions. There is also a pipe shaft running from the basement to the roof, designed especially to carry all pipes and thereby permitting repairs and changes to be made quickly and at the least possible cost.

In the first unit of the building there are two stairways, one at either end on the street side. The stairways are of reinforced concrete construction, with steel rails and anti-slip steel treads. At the stairway entrances to each floor are Coburn fire doors manufactured by the Coburn Trolley Track Manufacturing Co. of Holyoke, Mass. They are tin-clad, of the fusible link type.

Sanitary drinking fountains are conveniently located on the various floors, and the filtered water supplied is first cooled to the proper temperature in a main refrigerating plant, thereby eliminating the use of ice at the fountains and insuring pure water at the correct temperature.

One of the most interesting features embodied in the plant design is an humidifying and heating system installed to insure the proper temperature and amount of moisture in the air. The operating equipment of this system is located on the roof of the building in a specially designed building about 22x40 feet. It consists primarily of a radiator system for heating the air, a washing device for cleaning the air and giving it the proper amount of moisture, and a fan to drive the air through the ducts that deliver it to the various outlets scattered on the different floors. The system was installed by Parks-Cramer Company of Fitchburg, Mass., and Charlotte, N. C. Cool air enters the radiator in fan-room through special louvers designed by Francisco & Jacobus, engineers and architects of New York and Chicago. The equipment consists primarily of an Ingersoll-Rand air compressor made by the Ingersoll-Rand Company, New York city, and driven by a three-horse-power electric motor; a water pump made by the Buffalo Pump Co., and driven by a 15-horse-power motor; a Niagara Conodial fan made by the Buffalo Forge Co., Buffalo, N. Y., and driven by a 40-horse-power motor. All the motors were made by the General Electric Co. The amount of moisture and heat of the air to be delivered through the building is automatically maintained after the controlling apparatus is set and the machinery started. On each floor are six outlets from the system, and in each of these the air is again heated and supplied with the proper amount of moisture before being released. On each floor is a Parks-Cramer automatic regulator fastened to one of the concrete columns, and it may be regulated easily by setting two controls to the desired temperature and amount of humidification wanted, and thus the air will be kept constant until the regulator is again set. The air that is delivered to the various outlets passes through specially built ducts, lined with gypsum blocks enclosed with hollow tile to prevent any radiation or effect that outside temperature might have upon the operation of the system. The corners of the ducts are rounded to prevent friction, and the inside is finished smooth with plaster and cement.

The electric lights on the various floors are controlled by toggle

switches placed in boxes with double doors, the inner doors enclosing the fuses and preventing employees from coming in contact with them while operating the switches. The inner door is locked, and has to be unlocked before the fuses can be reached. These boxes were made by the Sprague Electric Works of the General Electric Co.

Corbin door closers made by P. & F. Corbin, New Britain, Conn., are used on all the doors.

In order to keep the floors clean, a chute has been built to deliver waste paper to a central baling-room in the basement. In addition, it is planned to install two steel gravity chutes for delivery of materials from the various floors and to the loading platform in the south end of the unit. In the south end is located the shipping platform and railroad tracks. They are within the building itself. The level of the tracks is so fixed that the floor of box cars are about on a level with the basement floor of the building, so that handling goods is facilitated. The platform is about 10 feet wide, of reinforced concrete, and sufficient space is now provided for about 10 cars under cover of the new unit.

The first floor of the building is of waterproof construction, and consists of a four-inch reinforced concrete slab, five-ply membrane waterproofing, three inches of concrete, finished monolithic and treated with Lapidolith made by L. Sonneborn & Sons, Inc., New York city. This construction was made necessary through the desire to prevent dampness in the building because of its effect upon stored products.

In the center of the east side of the first unit is located an Otis elevator, made by the Otis Elevator Co. of New York. It has a capacity of 4000 pounds and a speed of 200 feet per minute, and is electrically operated. The doors of the elevator are of the sliding type, and divided vertically in the center and so fixed that one rises and the other lowers to the ceiling and floor levels, respectively. The opening of the doors automatically prevents operations of the elevator. These doors were supplied by Peelle Company, 123 Liberty street, New York.

With this new plant the handling of materials by hand will be practically eliminated. Conveyor belts, gravity chutes and conveyors and electric storage battery trucks will be used extensively, with a view to reducing labor costs to a minimum. Conditions will be as sanitary as it is possible to make them. Hot and cold water will be provided in all the toilet-rooms, and individual steel lockers will be given each employee. The roof of the building has been so constructed that it will be possible to place upon it rooms for a private hospital, a cafeteria, recreation grounds, tennis courts, bowling alleys, etc., the company having no ground except that to be occupied by buildings. Food served in the cafeteria will be sold practically at cost, and will be prepared under the direction of a trained nurse and thoroughly inspected before being used.

The first unit of the plant is a five-story structure, with basement, 130 feet on Canal street, 195 feet 8 inches on 6th street. In its construction 11,000 barrels of Portland cement were used, together with 418,000 common and face bricks and 408 tons of steel, 7000 yards gravel and 3500 yards of sand. Work was started on April 15, 1920, and was finished on December 27. Because of labor shortage and difficulties in receipt of materials, the work was conducted over a much greater period than was anticipated. At one time car movements were so poor that four men were employed to expedite the movement of incoming materials. It was necessary to demolish an old building on the site before the work started on the first unit, and some of the bricks obtained from it were used in constructing the new plant; 3500 yards of materials were excavated for the foundation work. A Lakewood concrete plant manufactured by the Lakewood Engineering Co., Cleveland, O., was used in constructing the building and foundations. The tower, of wood construction and bolted together, making taking down and reassembling easy, was 190 feet high. At the peak of the work upwards of 375 men were employed, but much difficulty was experienced in getting help during the early part of the job, and progress was greatly retarded as a result. The payroll amounted to about \$10,000 weekly when operations were at their height, and 12 teams and 8 trucks were used. Materials for the work were handled over the private siding of the Allen & Ginter plant, and about 310 carloads were received. Because of their performance on the first unit, the H. K. Ferguson Company was awarded the contract for the second unit without competition.

The new unit will be of the same type as the one just completed.



and will front 130 feet 5½ inches on 6th street and 78 feet 8¾ inches on Cary. It will have an elevator and a similar projecting toilet-room tower. An old building on the site has been razed, and work is progressing rapidly upon the excavating and foundation work. This unit will require about 2600 yards of excavation, 5000 cubic yards of concrete work, 350 tons of reinforcing steel and 20,000 square feet of finished concrete floor, in addition to 65,000 square feet of maple floors; another humidification unit; 60,000 common bricks will be used, about 10,000 tile and 14,000 face brick. All the floors of the second unit and the one now complete have scuppers to carry off water if it should be necessary to use the sprinkler system or if water should get into the building by accident.

In connection with the work on the second unit, it will be necessary to underpin the south end of a five-story brick and frame building and place new concrete foundations beneath it to provide for the future development of the southeast corner of the tract owned by the company.

In order to take care of expansion and contraction in the two units, it will be necessary to install an elaborate expansion joint. This will consist of 20-ounce copper, angle iron and wood so placed that the V-shaped copper sheet fastened to the ends of the two units will allow for expansion and contraction and prevent dirt and moisture from getting into the crack between. Above the copper sheeting a steel plate fastened rigid to the end of one unit will move backward and forward as contraction and expansion takes place and prevent dirt and water from getting into the space above the copper.

As soon as the work in the second unit is completed, work will commence on the other sections of the plant. It is planned to have an open space or court in the center surrounded by buildings having daylight on all sides. A power-house and boiler-room and other auxiliary buildings will be built within the court. When the entire plant is in operation upward of 1000 horse-power will be used in operating the various equipment. Electric power is now purchased from the outside.

The offices of the company are to be moved into the second unit temporarily upon its completion, and will be ultimately housed in the third unit that will be built on the southeast corner of the company's tract.

In addition to the firms named above that furnished materials and had subcontracts on the first unit are the following: Carle-Boehling Company, Inc., Richmond, Va., heating; James E. Phillips & Son, Richmond, Va., plumbing; American Mason Safety Tread Co., Lowell, Mass., stair treads; Windshield Scupper Co., New York city, scuppers; Earnest Bros., Richmond, tile for temporary walls; Morris Hunter, Richmond, electrical work; Rueben Burton, Richmond, roofing and sheet-metal work; A. Hetzer & Sons, painting; Richmond Structural Steel Co., Richmond, and Dietrich Bros. of Baltimore, miscellaneous and structural steel; Binswanger & Co., Richmond, glass work; R. F. Carpenter Manufacturing Co., Cleveland, O., toilet partitions, etc.

### Begin Shipment of Rails for Export Over Warrior River Line.

Birmingham, Ala., March 28—[Special.]—The first shipment of a total of 8000 tons of steel rails from the mills of the Tennessee Coal, Iron and Railroad Co. have begun moving down the Warrior River for China. The power-boat Montgomery left the port recently with four barges loaded with 500 tons each. Other shipments followed in quick succession. It is stated that the saving by reason of moving the freight by the river instead of by rail will approximate \$5000. This is the largest export order ever handled by the Warrior River Barge Line.

### Mexican Demand for American Motor Vehicles.

Houston, Tex., March 14—[Special.]—According to Jacques E. Blevins, president of the Southern Motor Manufacturing Association, Ltd., Mexico offers a broad field for American automobiles and other motor vehicles. In a letter from Guadalajara he states that the field for automotive products seems practically unlimited. Guadalajara is one of the main business distribution points in the republic, while Monterey, Mexico City, Merida and Chihuahua City are equally important in the territory in which they are strategic points.

### Grain Growers Plan National Association for Co-operative Marketing.

Chicago, Ill., March 28—[Special.]—Reports received from the first State meetings to consider the grain marketing plan of the Committee of Seventeen indicate that it is receiving the endorsement of the representatives of farmers' marketing organizations, according to the Farm Bureau Federation, whose headquarters are in this city. Delegates to the ratification meeting in Chicago on April 6 are being named at the State meetings.

The Committee of Seventeen came into existence as a result of a meeting following a call of the American Farm Bureau Federation to all farmers, co-operative associations interested in marketing grain and livestock in July of last year.

Representatives attending the gathering, which included State co-operative grain dealers, associations, co-operative livestock shippers' associations, farmers' unions, societies of equity, State granges and farm bureau federations, as well as the Secretary and other representatives of the United States Department of Agriculture, adopted a resolution recommending the naming of the Committee of Seventeen to formulate and submit a "definite plan of organization whereby all organizations of grain producers can conduct co-operative grain marketing through one or more central organizations or grain exchanges, or such other solution of the co-operative marketing problem as may be approved by such committee."

The plan upon which the delegates will vote, it is said by the committee, will eliminate waste in distribution, excess freight charges, provide for orderly marketing and more stable prices, and add materially to the net returns to the grower without increasing the price to the consumer.

The plan recommended provides broadly for the concentration of grain selling in the hands of a national sales association, with membership and voting control limited to actual growers of grain. This sales association will establish branch offices at all principal grain markets, including seats on boards of trade if they are found to be desirable. It will establish a complete system of gathering and interpreting statistics of world conditions affecting supply and demand. It will provide adequate means for financing orderly grain marketing through a subsidiary finance corporation. A subsidiary warehouse corporation will provide terminal and district warehouses, with cleaning and conditioning machinery. An export corporation, also a subsidiary of the national sales association, will find foreign outlets for surplus grain. All money received for grain, less operating and handling costs, will be returned to the growers.

The plan makes no attempt to put grain marketing at once on a nation-wide pooling basis, but provides means for the development and extension of pooling as experience proves its adaptability to the grain business.

### Birmingham Leads in Savings Deposits.

Birmingham, Ala., March 23—[Special.]—The increase in savings deposits in the banks of Birmingham on March 15, as compared with the total on March 15, 1920, amounts to over 14 per cent. The figures are \$19,108,000 for March 15, 1920, and \$21,933,000 for March 15, 1921, an increase of \$2,825,000. This compares with an increase for New England in the same period of 7.56 per cent, and for the Pacific Coast of 6.99 per cent. For the whole country, the increase in 635 savings institutions was 9.30 per cent. This showing is all the more remarkable for Birmingham, when it is known that the 1920 deposits showed an increase over the 1919 figures. Bankers report that savings are still on the up grade, indicating that conditions in this city are much more favorable than elsewhere throughout the country.

### Shipyard Used for Vocational School.

Pascagoula, Miss., March 14—[Special.]—On February 25 the United States Vocational Board opened a vocational school here for the training of soldiers in vocational callings, the shipyard and other buildings of the International Shipbuilding Co. being leased for this purpose. There are now 100 soldiers at the school, and those in charge state that there will be some 1200 or 2000 by the end of the year.

# The South and Protection From the Standpoint of a Southerner

[Judge Whitmell Pugh Martin of Thibodaux, attorney, for some time judge of a Louisiana district court, native Louisianian and present member of Congress, is a protectionist from principle. In 1912 Judge Martin was alternate delegate to the Baltimore convention that nominated President Woodrow Wilson, and was an ardent supporter of Wilson; but when the Underwood tariff bill, placing sugar on the free list, was passed, materially reducing the duty upon other products of Louisiana, believing that the Democratic party had violated its traditions and platform pledges, and being of the opinion that a free-trade policy would prove ruinous to the interests of Louisiana, he left the Democratic party and joined the Progressive party. He was nominated by the convention as the Progressive candidate for Congress, and defeated his Democratic opponent by 1426 votes, being the first non-Democratic Congressman to be sent from Louisiana in over 25 years. He was re-elected to the Sixty-fifth Congress on the Progressive ticket. He was nominated by the Democrats for the Sixty-sixth Congress, and elected without opposition.—Editor Manufacturers Record.]

By WHITMELL P. MARTIN, Representative in Congress from the Third District of Louisiana.

If it be true that "Coming events cast their shadows before them," then the day is not far distant when the South will insist that its representatives in Congress shall so vote as to give fair and adequate protection to the products and industries of that section of the country.

This change of sentiment has been slowly growing in the South for the past ten years, but the conditions that have prevailed for the past year have so crystallized and intensified this sentiment that the Southern farmers and manufacturers have been brought to a realization of the fact that they cannot compete with like products admitted into this country free of duty and produced by foreign, cheap labor.

A comparison of the value of our imports for the past few years will show that the fear of the Southern producers and manufacturers, that the market for their products will be destroyed by reason of the glutting of our markets with the products of other countries, is well founded.

Taking the pre-war year ending June 30, 1914, we find that our imports amounted to \$1,900,000,000, and while imports dropped to some extent during the war period, yet we find that for the year ending June 30, 1920, our imports reached the unprecedented figure of \$5,238,000,000, or an increase over 1914 of more than 275 per cent.

Of these imports, many of them come in direct competition with Southern-grown and manufactured products, with such a resulting demoralization of the markets that most Southern products are now selling far below the cost of production.

The cotton producers of the South, the price of whose staple is fixed, to a large extent, by the price of cottonseed and cottonseed oil, protest that it is unfair for them to be forced to compete with the cottonseed, peanut and soybean oils produced by the cheap labor of Korea and China.

The peanut growers of Georgia, North Carolina and Texas protest that their industry is being destroyed by imports from the Oriental countries.

The wool growers of Texas and Western States protest that this country is being flooded with the wools of Australia and New Zealand, and that shiploads of slaughtered lambs are being shipped in cold storage and marketed in this country, resulting in such disaster to the sheep industry that it will take prompt tariff legislation to save the industry from ruin and disaster.

The rice producers of Louisiana, Arkansas and California protest vigorously against being forced to compete against an article produced by the cheapest labor in the world.

The sugar producers of the South and West protest that if their industry is to be saved, it must be granted additional protection against the cheap contract labor of Cuba and South America.

The appeal from the Southern producers and manufacturers to Congress for relief is well-nigh universal, and it has not fallen upon deaf ears.

An analysis of the vote by which the Fordney Emergency Tariff bill originally passed the House of Representatives shows that out of 113 Democrats who were present and voted, 71 voted against the bill and 42 voted for the bill. Including those who were paired for and against the bill among the Democratic membership, the vote stood 94 against the bill and 48 for it, thus showing that

more than 33 per cent. of the Democratic membership cast their vote in favor of this emergency measure.

Louisiana, with a membership of 8 Representatives, cast 7 votes for the bill; Virginia, with a Democratic membership of 9, cast 7 votes for the bill; Texas, with a membership of 18, cast 8 votes for the bill; Georgia, with a membership of 12, cast 5 votes for the bill; Arkansas, with a membership of 7, cast 3 votes for the bill; Florida, with a membership of 4, cast 2 votes for the bill, and Mississippi, Tennessee, Alabama and North Carolina each cast 1 vote for the bill. The remaining 12 Democratic votes came in most part from the Western States.

While it thus appears that quite a large percentage of Southern Democrats voted for the bill, it is yet remarkable that the percentage was not much higher.

Those who stand for a tariff for revenue only would have been justified in casting a favorable vote, because never in the history of the country has the Government been in such dire need of revenue, while those who believe that our domestic industries should be on an equal basis with foreign competitors were in duty bound to vote for the measure, because it was conceded that foreign goods and products are being dumped into this country and being marketed at prices much below the cost of production in the United States.

Either position was in direct line with Democratic precedents. Democratic platforms, and entirely in accord with the views of such eminent Democrats as Jefferson, the Father of the Democratic party; Madison, Monroe and Jackson.

Senator Sheppard of Texas, in speaking in favor of the Fordney Emergency Tariff Bill, directed the attention of his colleagues to the fact that on July 1, 1812, Congress enacted a tariff law levying duties of 100 per cent, in addition to all existing duties, and providing that the law should remain in effect as long as the war should continue, and for one year thereafter. Before the year had elapsed a Democratic Congress extended the law for six additional months.

Referring to the Fordney bill, Senator Sheppard said: "It has the same general purpose as had the Democratic tariff legislation following the War of 1812—reconstruction and recovery, with a minimum of dislocation on a basis of fairness to all industry."

The Democratic platform of 1872 contained this declaration:

"Recognizing that there are in our midst honest but irreconcilable differences of opinion with regard to the respective systems of protection and free trade, we remit the discussion of the subject to the people in their congressional districts, and to the decision of the Congress thereof, free from Executive interference and dictation."

This declaration left every Democratic member of Congress free on matters of tariff, and shows that there was an honest difference of opinion within the Democratic ranks on this great question.

It is hardly necessary to refer to more recent Democratic platforms, declaring that tariff rates are necessarily subject to change to meet changing conditions in the world's production and trade, and that our tariff system is intimately connected with the busi-

ness of the country, and that the principles of the party should be attained by legislation that will not injure or destroy any legitimate industry.

It was that great apostle of Democracy, Thomas Jefferson, who, in his second annual message, said:

"To protect manufactures adapted to our circumstances is one of the landmarks by which we shall guide ourselves."

It was James Madison who, in a special message, in 1809, said:

"It will be worthy of just and prudent care of Congress to make such further alterations in the laws as will more especially protect and foster the several branches of manufactures which have recently been instituted or extended by the laudable exertions of our citizens."

It was James Monroe who declared that:

"Our manufacturers require the systematic and fostering care of the Government. Equally important is it to provide for our raw materials."

It was Andrew Jackson, who, in his message of 1832, commenting on the protective acts of 1824 and 1828, said:

"Our country presents, on every side, marks of prosperity and happiness unequalled, perhaps, in any portion of the world."

These utterances of eminent Democratic leaders were made at times when the economic conditions in this country were nowhere near as serious as they are at the present time, and when we consider the fact that Europe is fast recovering, both economically and industrially, and that her exports to this country are increasing day by day, it would seem to follow that unless there be some revision of the tariff, having for its purpose the placing of our industries on a competitive basis with those of foreign countries, then many of the great manufacturing and agricultural industries of this country are doomed.

That there is an awakening in the South to the seriousness of the present situation is shown by the fact that many of the thinking business men are organizing and have formed a Southern Tariff Association for the purpose of creating a sentiment for protective legislation and urging Southern members of Congress to see that Southern industries and products are accorded fair treatment in the framing of the tariff bill which will be enacted at the approaching special session of Congress.

From Virginia to Texas, the people are appealing to their members of Congress to support some measure that will afford them relief from present conditions, and to see to it, in the forthcoming revision of the tariff, that their industries are given a fair and equitable measure of protection.

The Southern farmers and manufacturers care not whether their Representatives favor a tariff for revenue or a tariff for protection, but what they do demand and expect of their Representatives is that they shall assist in revising the tariff upward to the end that they may be put on an equal basis with the foreigner in the markets of the country.

It will avail nothing if the Southern Congressman considers the matter from a selfish standpoint, and while voting to protect the products in which his constituents are directly interested, finally opposes the bill because other constituencies are allowed the same recognition which he demands.

Tariff is a national question, and its consideration should be approached with the view of accomplishing the greatest good for the greatest number.

That the tariff will be revised at the approaching session of Congress is now a certainty, and let us hope that our Southern Representatives will heed the appeal of their constituencies and will participate in the general revision, with the view of relieving those of our great industries whose very existence is now threatened.

### Improved Banking Conditions in Mexico.

Monterey, Mexico, March 23—[Special].—Banking conditions in Mexico show a big improvement. This is indicated by the resumption of a number of financial institutions and the announcement that others are to reopen soon. The list includes the National Bank of Mexico, the Banco de Londres y Mexico, the Banco de Nuevo Leon, the Banco Mercantil de Monterey, the Banco de Durango, the Banco de Morelos, the Banco de Aguas Calientes and the Banco de Oaxaca.

### HUGE CONSTRUCTION CONTRACTS IN TAMPICO DISTRICT.

**Foundation Company of New York Has Mexican Contracts Totaling \$12,000,000, With 4000 Men Employed—Work Includes Wharves, Tank Farms, Terminals, Pipe Lines and an Office Building.**

Tampico, Mexico, March 23—[Special].—More big construction contracts are being carried out in the Tampico region at this time than ever before in the history of the oil industry in Mexico. One concern, the Foundation Company of New York and Tampico, which entered the Mexico field only a few months ago, has construction contracts in this country involving the expenditure of approximately \$12,000,000, it is stated. It already has approximately 4000 men upon its payroll here and the number is being constantly increased. The projects upon which the company is now working are 12 in number. One of the largest of these is the 30,000-barrel refinery for the Corona Petroleum Co., subsidiary of the Royal Dutch Shell interests. The soil tests were made on the refinery last July and the work began in August. According to Frank Y. McLaughlin, manager of the Tampico office, the first unit of 15,000 barrels is scheduled for completion in June; the second unit, of similar capacity, will be completed in December. The first unit will be just a topping plant for fuel oil and gasoline. The completion of the second unit will enable the company to take care of lubricating oils, greases and asphalt.

The company's 8-inch pipe line, from Zacamixtle to the Chijol refinery, a distance of 120 kilometers, is scheduled for completion June 1. The pipe laying will be completed by the middle of next month. There will be six pumping stations on this line, one every 20 kilometers, each with a capacity of 30,000 barrels.

The Foundation Company has completed a cargo wharf for La Corona Petroleum Co. at the Chijol terminal. It is designed for a load of 100 pounds per square foot, and is equipped with a standard-gauge track and 20-ton locomotive cranes. The work on this wharf began in the latter part of December. The wharf was finished last month.

A similar cargo wharf is being built at El Humo, terminal of the Tampico Panuco Valley Railroad, and will be finished April 1.

A cargo wharf has been completed on the lagoon near San Andres, designed for 500 pounds to the square foot, and another is about to be started.

The Foundation Company is also rushing work on the 5-story office building of the Transcontinental Petroleum Co. It is built in accordance with the Chicago building code, of structural steel, brick and tile. Work started in November, and it is expected the building will be finished June 1. Remarkable progress has been made on the work, and there would be a still more remarkable record had it not been that the delivery of structural steel was delayed 30 days by a freight embargo at Nuevo Laredo. All the steel has been erected and the brick work is now up to the third floor, the interior work following rapidly.

The Foundation Company is also doing considerable work for the Cia. Mexicana de Petroleo El Aguila, having finished its oil wharf at the Chijol terminal last month, and now started another on the same terminal.

One mile of bulkhead for the latter company, at its main depot, has been started and will be completed in July.

One of the company's biggest contracts calls for the completing of a tank farm for the Cia. Mexicana de Petroleo El Aguila by November of this year. There are to be 50 tanks of 64,000-barrel capacity. Actual construction of ten tanks is now under way, with 24 riveting gangs on the job. A complete air plant is being installed which will deliver 2000 cubic feet of free air per minute—enough to work 60 riveting gangs using pneumatic tools. The contract for the tank farm also calls for miles of 16-inch piping and of industrial railroad tracking.

A 10-inch pipe line, from Amatlan to Port Lobos, for an English concern, has been contracted for, and it is expected that work will begin shortly.

A contract has been entered into with the Parral & Durango Railroad for extension developments to that line. Engineers will begin their preliminary work on April 15. The line at present



runs from Parral, Chihuahua, to Mese de La Sandia, State of Durango.

Executive officials from the New York office—H. J. Deutschbein, vice-president and general manager; John C. Sheridan, manager of the foreign department, and R. L. Dalton, assistant secretary-treasurer—who have been on a tour of inspection of the company's affairs in Mexico, express great satisfaction at the results already obtained.

### United States Steel Report for 1920 Records the Greatest Volume of Business in Its History.

Another high record as to volume of business was established by the United States Steel Corporation in 1920 the nineteenth annual report, which covers the operations of last year, showing that the aggregate of operations for the twelve months ended December 31, reached the enormous sum of \$1,755,477,025, or \$306,919,190 more than in 1919, and about \$10,000,000 greater than the previous high record of 1918, when over \$1,744,000,000 of business was conducted.

Chairman Elbert H. Gary's review of the year is valuable for its comprehensive outlook of the steel industry. He says:

"The demand for iron and steel products during the first seven months of the year was large, the new business booked from month to month materially exceeding capacity. Beginning with August, there was a slackening in the volume of orders offering. The new business accepted during the year, with the considerable tonnage of unfilled orders carried over from 1919, enabled the properties of the subsidiary companies to operate to very nearly full capacity, except as operations were interfered with (especially from April to July inclusive), because of inadequate railroad service, arising principally from strikes and from shortage in fuel supplies. For the entire year the output of the steel plants, measured by the tonnage of finished products for sale, averaged 88.3 per cent of total rated capacity. No change was made during the year in the domestic prices for the principal steel products which were in accordance with the schedule announced by the Industrial Board of the Department of Commerce on March 21, 1919, to which reference was made in the last annual report. This price schedule was adhered to by the subsidiary companies notwithstanding the demand for steel was such during the first half of the year that higher prices could have been obtained. The price policy adhered to by the Corporation, however, enabled it, notwithstanding substantial increased costs arising from advances in labor rates, in freight rates and higher costs for raw materials required to be purchased, especially fuel, to net considerable profits and to maintain operations at the degree above mentioned, also to carry forward to 1921 a large tonnage of unfilled orders. These latter, at December 31, 1920, totalled 8,148,122 tons of various classes of steel products in comparison with a total of 8,265,366 at the close of 1919. The unfilled tonnage at December 31, 1920, has since been reduced to 6,933,867 tons at March 1, 1921."

The largest number of employees in any one month of 1920 was in March, viz., 275,552, and the average for the entire year was 267,345. The average salary or wage per day was \$7, an advance of 83 cents, as compared with 1919, but it is further said:

"Because of advances in wage rates at different times during the year and affecting different groups of employees, the foregoing rate of \$7 does not fully indicate the average paid at the close of the year. For October, a representative month, the average rate was \$7.23 per day; for December, \$7.19 per day."

The comparative income account of the corporation shows that total earnings for the year (after allowing for estimated Federal income and excess profits taxes) were \$185,095,359.28, an increase of \$32,804,720.04, as compared with 1919. After interest, dividends, etc. were paid, there was left a surplus net income of \$59,059,425.64; increase, \$32,899,645.09. From this \$30,000,000 was appropriated on account of expenditures for additional property and construction, the balance carried to undivided surplus being \$29,059,425.64, an increase of \$2,899,645.09.

Tobacco growers in Campbell county, Virginia, have formed a county branch of the State Tobacco Growers' Association, with Dr. T. W. Evans of Concord, Va., as president.

### Power-House and Transmission Lines to Be Built—Co-operative Sweet Potato Shipments.

Raleigh, N. C., March 25—[Special.]—The Federal Power Commission has issued a permit to the United Mills Co. of Hickory, N. C., to construct dams on Harper's Creek, in Caldwell county, to generate 1400 horsepower; to build power-houses and transmission lines; the power to be used in operating a cotton mill at Mortimer. The latter place is on the Carolina & North-western Railway, now owned and operated by the Southern Railway. At Mortimer, one of the largest lumber companies has, for a number of years, had sawmills, but these were abandoned last summer, the timber having been cut, and the village, with a large number of homes built by the lumber company, was taken over by the Cotton Mills Company, which has nearly completed a mill and is now running a storage warehouse. By the first of May this mill will be in operation. It will use steam power until next year, when the United Mills Co. expects to put its hydro-electric plant in commission. This permit for hydro-electric development is the first issued in North Carolina. This State does not have a power commission, so under the general law, the Federal Power Commission takes charge of the right to develop commercial water-powers.

Following the excellent example of the sweet potato growers of Catawba county, the Caldwell county farmers are to make co-operative shipments. In the next 10 days 6000 bushels will thus be shipped to the North and West mainly. These potatoes have been in storage warehouses, and will be carefully graded and packed. They are shipped in three-bushel crates, 36x11 $\frac{3}{4}$ x18 inches in dimensions, one-inch frame work. Catawba is the largest sweet potato shipper in this State and the South. It and Caldwell adjoin, and both are in the foothills of the Blue Ridge.

A contract is let for the erection of a \$250,000 hotel-clubhouse on "Lakeland," the new addition by Mr. Leonard Tufts to Pinehurst, the building to be completed by next autumn. Two golf links are under construction at Lakeland, which is between Pinehurst and Lakeview, the latter on the Seaboard Air Line Railway. There are four golf links at Pinehurst.

### Steel Corporation to Consider Changing Eight-Hour Day and Seven-Day Week.

New York, March 25—[Special.]—A committee composed of presidents of subsidiary companies of the United States Steel Corporation is at work on the problem of abolishing the eight-hour day and the seven-day week in the mills of the Corporation, and a report is expected in about 30 days. It is believed here that the report will be adopted, the appointment of the presidents on the committee being regarded as evidence that the intention is to make the much-discussed change.

The chief problem in connection with the innovation, officials of the Corporation say, will be one of changing the wage scale, and also of providing eight hours of continuous work for employees, both of which mean sharp readjustments. The present two-shift system will not be easy to change, they say, and there will be difficulty in settling upon a satisfactory wage scale at a time when the whole problem of wages is in a state of flux.

The men are paid at present on an eight-hour basis, with time and one-half for their four hours' overtime. The problem is still further complicated by the necessity for lowering the price of steel to keep pace with other falling commodities, and the need for developing new markets to absorb whatever increased production might result from the shift in schedules.

### Anticipate Big Melon Crop This Year.

Springfield, Mo., March 24—[Special.]—About \$400,000 worth of melons will be produced this year in the commercial canteloupe country of Southeast Missouri, according to the estimate of a local commission house. The acreage has been increased since last year about 200 per cent. One thousand acres will be planted, and the production should be about 140,000 crates, or 350 cars of canteloupes.

## "Our Masters—The Board and the Bankers"

[The following article by George W. Armstrong was delivered as an address on March 16 at the Cattle-men's Convention in San Antonio, Tex. It is an extremely interesting and forceful presentation of the evils resulting from the Federal Reserve Board's drastic deflation policy, and it points out the grave dangers which are inherent in any board so organized and controlled. Mr. Armstrong is a well-known business man of Fort Worth, the president of a large iron and steel company there. He also operates a number of big plantations.—Editor Manufacturers Record.]

By GEO. W. ARMSTRONG, Fort Worth, Tex.

"They spin not, neither do they weave, and yet Solomon in all his glory was not arrayed like one of them," and in all his power was not so powerful, and in all his wisdom was not half so wise.

Since the National Federal Reserve Board asserts the authority to fix the relative values of money and commodities, and to pass judgment on essential and nonessential industries, which involves as a consequence the power to prescribe the terms and conditions under which we shall live and labor and have our being, it is important that we know who these great and powerful men are, how they are constituted, and how they perform their work. There are but seven of them—four bankers, Messrs. Harding, Wills, Mellon and the Comptroller of the Currency; one lawyer, Mr. Hamlin; one editor, Mr. Platt, and one college professor, Professor Miller. Although the law provides that they be appointed from the "commercial and industrial and geographical divisions" of the country, Messrs. Platt, Hamlin and Miller were actually residents of Washington at the time of their appointment, Mr. Platt being a member of Congress and the other two attaches of departments.

The only change made in the Board by the change of Administration is in the ex officio members, viz., the United States Treasurer and the Comptroller of the Currency. Prior to March 4 the Board consisted of two bankers, two college professors, an editor, a lawyer and John Skelton Williams. This is the Board that inaugurated the deflation program. While the residence, or representation of "divisions" of the country, is stressed in the law, it is not nearly so important as the character, training, experience and life environment of the appointees. Not one of the old seven, with the possible exception of Mr. Williams, knew anything of the misery and despair of deflation, except in an abstract and theoretical way. They only knew by experience that deflation meant lower values of property of the other fellow and greater purchasing power of the salaries of themselves and their friends of their class. In the nature of things, they could not have very deep sympathy for the farmer, never having farmed; for the laborer, never having been thrown out of a job; for the business man, never having spent sleepless nights to figure out a way to meet his obligations.

The Federal Reserve law provides for an "Advisory Council" of 12 men, one to be elected from each of the 12 Federal Reserve districts by the directors of the Federal Reserve banks. As the law provides that a majority of the directors of these banks shall not be bankers, Congress probably assumed that at least some of the "Advisory Council" would not be. This may be another one of the "jokers" that was inserted in the bill while it was in conference. All of them are now in fact bankers. The law does not undertake in any way to prescribe the qualifications of the members of this "Advisory Council." Although their duties are not very clearly defined, and their power appears to be subordinate to the power of the Board, it is apparent that they are intended to be the directors for the system. All of the members of the Board are really active managers of the system, with offices in Washington, and all of them except the two ex officio members are paid salaries of \$12,000 each for their services, which is the largest salary that any of them ever received, with one possible exception.

The following constitute the present membership of the "Advisory Council":

- Philip Stockton, president Old Colony Trust Co., Boston.
- A. B. Hepburn, chairman advisory board Chase National Bank, New York.
- Levi L. Rue, president Philadelphia National Bank, Philadelphia.
- W. S. Rowe, president First National Bank, Cincinnati.
- J. G. Brown, president Citizens National Bank, Raleigh, N. C.
- Oscar Wells, president First National Bank, Birmingham, Ala.
- J. B. Forgan, chairman of board First National Bank, Chicago.

Frank O. Watts, president First National Bank, St. Louis.

C. T. Jaffray, president First National Bank, Minneapolis.

E. F. Swinney, president First National Bank, Kansas City.

R. L. Ball, chairman of board National Bank of Commerce, San Antonio, Tex.

A. L. Mills, president First National Bank, Portland, Ore.

The law itself shows a distrust upon the part of Congress of banker control of the system. It makes it impossible for bankers to control the Reserve banks. Congress perhaps was under the delusion that the system was a decentralized system and not, as it is in fact, a central bank controlled by a board of practically unlimited authority, with branches having local boards of very limited power. In fact, the bill as originally drafted did provide for a decentralized system; did provide for an elastic currency and credit system that would expand and contract with the demands of commerce, and did provide for a system free of banker control. It got into a conference committee of the House and Senate, where Messrs. Carter Glass, Paul Warburg, Platt and others evolved the present law.

It is now highly satisfactory to the bankers, who sing its praise with great accord and loud acclaim. And well they may, for, according to the report of the Comptroller and Director Williams, their average profits last year, when the balance of us were losing heavily, were 23.09 per cent, the greatest in their history. The rate of earnings of the big city banks was much higher. In addition thereto, it appears from this report that these banks paid very large salaries to their officers, some of them paying as much as \$500,000 annually for a president and vice-presidents. If the system had done half as much for the balance of us as it has for the international banker, we, too, would like it and defend it. The bankers actually believe that no one can operate it except themselves, and that it is for the good of the country that they do so.

On April 13, 1920, Congress amended the Federal Reserve law by adding paragraph (d), section (14), authorizing the Federal Reserve banks to establish discount or credit line for member banks, and to impose a graduated interest rate on loans in excess of the credit allowed. On May 17, 1920, 34 days after the adoption of this amendment, the Senate, without discussion and without a recorded vote, adopted the following resolution:

"Resolved, That the Federal Reserve Board be directed to advise the Senate what steps it purposes to take or to recommend to the member banks of the Federal Reserve System to meet the existing inflation of currency and credits and consequent high prices, and what further steps it purposes to take or recommend to mobilize credits in order to move the 1920 crop."

\* On the same date the Federal Reserve Board and Advisory Council were in joint session in Washington. On May 18 the Board and Advisory Council met with the 36 Class A directors, the banker directors of the 12 Reserve banks. These 36 additional bankers were all in Washington on May 17 or en route there. None of the 72 directors composing Classes B and C of the Federal Reserve banks, and being composed wholly of business men who are not bankers, were present, and none of them were invited to be present.

The Board reported to the Senate on May 25 the "steps" it had taken to "meet the existing inflation of currency and credits and consequent high prices." (See June issue Federal Reserve Bulletin, pages 582, 583, 584.) It is clear that somebody, some powerful influence, some "master mind" directed all of these operations—the amendment of the law, the Senate resolution, the convention of bankers and the decision to deflate. It did not all just happen so. Congress was imposed on by somebody. It was a quick, smooth job that was put through quietly, without attracting public attention, without opposition and without discussion. This

decision made by the Board and these 48 bankers is fraught with consequences that no one can now estimate. It has substantially repealed the surtax and excess profits tax by making it impossible to earn the necessary profits; has doubled the Government's bonded indebtedness by requiring twice the amount of labor and the products of labor to pay it; has doubled the value of the dollar, and of all obligations to pay money, and reduced correspondingly the value of all property. It has shut down industry, throwing millions of men out of employment; cost the farmer \$7,000,000,000 on last year's crop, and made it necessary for him to curtail future production. It has bankrupted untold thousands of men and beggared untold millions of women and children.

It appears from the Board's report to the Senate that the conference of bankers of May 18 unanimously adopted the following report made to it by the Advisory Council through its president, John B. Morgan:

"(a) Causes of continued expansion of credits and of Federal note issues.

"(1) We recognize, of course, that the first cause is the great war.

"(2) Great extravagance, national, municipal and individual.

"(3) Inefficiency and indifference of labor resulting in lessening production.

"(4) A shortage of transportation facilities, thus preventing the normal movement of commodities.

"(5) The vicious circles of increasing wages and prices.

"(b) Remedy. By urging upon member banks through the Federal Reserve banks the wisdom of showing borrowers the necessity of the curtailment of general credits, and especially for nonessential uses, as well as continuing to discourage loans for capital and speculative purposes; by checking excessive borrowing through the application of higher rates."

Governor Harding assures the Senate in his report that "the Board will not hesitate, so far as it may be necessary, to bring to bear all its statutory powers in regulating the volume of credit."

Of course, there was expansion of credit, for there was great prosperity. Every note, check and draft that is given, every dollar that is paid out for payroll or for the products of the farm or factory expands credit.

The greater the activity and prosperity—and the higher the values—the greater will be the expansion.

Every note that is paid, every dollar of currency that is retired, every laborer that is discharged, every farm that is abandoned, or factory that is closed, "deflates" it.

Expansion means prosperity and happiness.

Deflation means contraction of business and of effort, and expansion of idleness and want and misery and crime. Compare the conditions now with those that obtained on May 18, 1920, and you may be able to appraise the difference between expansion and deflation.

There has been no expansion of currency. According to the recent annual report of Comptroller Williams (a member of the Board), the proportion of currency in circulation to bank resources was less on June 30, 1920, than on June 30, 1914, it being 13 per cent in 1914 and 10 per cent in 1920. This, however, refers to the entire volume of currency, the most of which is in the pockets of the people. The banks actually held on June 30, 1920, only \$2,060,000,000 of currency, or 5 per cent of their deposits, aggregating more than \$40,000,000,000; 4 per cent of their total resources, aggregating more than \$50,000,000,000. And yet they claim that the currency is inflated, and they continue to deflate. They reduced it \$199,000,000 in January, which meant a reduction of \$1.93 per capita, or  $3\frac{1}{3}$  per cent, or a reduction in property values of about \$15,000,000,000.

Of course, there was "great extravagance, national, municipal and individual," and there has always been and will always continue to be such extravagance. Governments are always extravagant, and there are many vain, improvident and foolish individuals who are so. This is beyond the power of the bankers to remedy. But people generally were not extravagant. This same report of

Comptroller Williams shows that during the year ending June 30, 1920, the number of saving depositors increased 496,519, and their average deposits increased from \$494.14 to \$550.92, and that the aggregate increase amounted to \$433,732,000. It is true also that there was "inefficiency of labor, resulting in lessened production," but the methods they adopted to increase production are infinitely worse. The Board estimated the lessened production at 10 per cent on its report of each of the following items, viz., livestock, grain, lumber, coal, petroleum, pig-iron, steel ingots, copper, cotton and wool. The policy they adopted for the pretended purpose of remedying this situation will lessen it still further from 25 per cent to 50 per cent.

These are but excuses and subterfuges. We have a right to labor as we please, spend our money as we please and produce as we please without governmental restraint or control. It is not for the rich banker who lives luxuriously to lecture us about our extravagance; whose office hours are from 9 to 3, with two hours off for lunch, to make us work; who produces nothing, to complain of our production. This pretended "mobilization of credits for crop-moving purposes" was all bunk to deceive Congress and the people. This deflation is nothing more nor less than a cold-blooded, carefully planned and smoothly executed shakedown of the American people for the purpose of increasing the buying power of the dollar. The money and notes and bonds of the bankers attending the May conference, and the buying power of the salaries of the politicians who aided and abetted them, were practically doubled in value by the operation they performed. This is exactly what occurred following the Civil War, known as the crime of '73. It is exactly in line with the decision of the Brussels conference. It is the harvest the bankers usually reap following war.

They tell us that this depression is psychological, but this psychology or "wrong thought" has been brought about by the bankers—is now fostered by them—and is largely confined to them. There is no mental delusion on our part about the fact that they are making us pay, and that we can't borrow. We will have the "right thought" when the bankers have the "right thought," and not before. Business will loosen up when the bankers loosen up, and not sooner. It is not imaginary. It is real. It is not a "buyers' strike." The buyers are out of a job, have no money, and cannot buy. It is not the impoverishment of Europe. The bankers have made money so dear and exchange so high that Europe cannot buy.

If anyone can tell me when the discount rate will be lowered and the pressure removed—when this miserly hoarding of gold and of credit by our banking system will end—I can name the date when business will again begin to function.

We cannot have stability of values and enduring prosperity until the Federal Reserve law is amended in substantially the following particulars:

1. The amendment of April 13, 1920, authorizing the Reserve banks to limit the credit to be extended to member banks and to impose a graduated interest rate, should be repealed.

2. It must provide for a large representative directorate. There is no necessity in paying the directors salaries and having them maintain offices in Washington. Forty-five directors, as recommended by the Aldrich Commission, is about the proper number, but a majority of them should not be bankers.

3. These directors' meetings should be publicly held and a public record kept of them. No one can now definitely place the responsibility for the deflation program. It is inconceivable that such a destructive course would have been entered upon if there had been a public discussion and understanding of the question, especially if the directorate had been composed of men from the different walks of life.

4. The power of this Board should be restricted, at least within constitutional bounds. The terms and conditions under which currency and credit may be extended should be prescribed in the law itself, and not left to the discretion of the management, and these terms and conditions should be broad and elastic enough to meet the demands of commerce without reference to the value of commodities.

5. The minimum gold reserve for currency should be reduced to 10 per cent instead of 40 per cent, and the 35 per cent gold



reserve for deposits should be repealed entirely. The volume of gold does not measure the demands of commerce for currency or credit. The real basis for currency should be commercial paper, supplemented if desired by Government bonds. The 35 per cent gold reserve for bank deposits is a joke and a joker. The law itself clearly provides that the banks shall receive Federal Reserve Bank notes in settlement of their deposits, and not gold. There is, therefore, no occasion to secure them with gold.

### Completes First Well for Large Southern Bleachery.

The Hughes Specialty Well Drilling Co. of Charleston, S. C., and Atlanta, Ga., advises the MANUFACTURERS RECORD that they are now drilling an initial series of wells at Griffin, Ga., from which it is expected to obtain 2600 gallons of water per minute to operate a large bleachery. The company says that if sites are properly selected and due consideration given to certain geological conditions encountered in granite and similar crystalline rock, this amount of water can be obtained. It estimates that between 20 and 30 wells will be required to produce the requisite quantity of water in the Griffin territory. The preliminary contract secured by the Hughes Company does not specify a definite number of wells, but it is expected to proceed with drilling until the total number of wells necessary to supply the maximum quantity of water have been completed.

Plans call for the equipment of these wells with nonpulsating double-stroke deep-well power pumps, electrically operated with remote electrical control apparatus. It is expected that they will pump the water to some central point of the bleachery.

Being in the granite area, the wells will be spread over a considerable distance, the farthest well probably being one or two miles from the plant. The plan proposed is to operate the wells and pumps from one central point, the wells numbered say from 1 to 30 and designated on a switchboard in an office where by pushing a button, any individual well may be started or stopped.

With reference to the foregoing development the Griffin Daily News and Sun says: "The first deep water well at Kincaid Mill No. 1 was completed and tested by the Hughes Specialty Well Drilling Co. This well was drilled for the purpose of developing the quality and quantity of water at that point for bleaching purposes and the results are of a most satisfactory nature. The well will easily afford more than 200 gallons of water to the minute, which means at least 300,000 gallons a day, which is much greater than was anticipated and a larger quantity than any other well in Griffin produces."

"Starting directly in granite from the very beginning, the drilling proceeded the entire distance of 350 feet through the solid rock. Samples of the water have been already sent for analysis and will, so far as appearances go, fulfill all of the requirements for the purpose for which it was obtained."

"The immense steel derrick and drilling outfit is now being removed a distance of about 300 feet from the first location, where another similar well will be drilled at once. In the meantime, the Hughes Company has received another complete drilling outfit which will be put to work on a third well for the Kincaid Manufacturing Co."

### India Raises Duty On Cotton Goods and Lancashire Kicks.

Manchester, March 3.—[Special.]—Both employers and operatives engaged in the Lancashire cotton industry have been keenly interested this week in the decision of the Indian Government to increase the import duty upon all manufactures, including cotton goods, from  $7\frac{1}{2}$  to 11 per cent.

This action is undoubtedly a serious blow for Lancashire, although it is probable that an alteration in the tariff will have a more serious effect upon Japanese firms. Mr. W. H. Harley, the finance member of the Indian Legislative Assembly, in introducing his budget, stated that the sole object of the increased duties was additional revenue, and had no ulterior motive of a protective kind.

If this attitude is correct, it is rather remarkable that the Government has not thought it necessary to increase the excise

duty, which would have the effect of placing Lancashire and Indian manufacturers on even terms. It will be remembered that in March, 1917, the Indian Government increased the import duties on cotton goods from  $3\frac{1}{2}$  to  $7\frac{1}{2}$  per cent without any corresponding increase in the excise duties. Lancashire was up in arms at the proposal, but their opposition was met by the statement that the extra charges were in order to enable the Indian Government to make a contribution of £100,000,000 towards the cost of the war, and that it was undesirable that there should be any controversy when the Empire was in danger. Lancashire was not satisfied with this position, and important debates took place in the House of Lords and the House of Commons. In order to meet the opposition, the British Government made a promise that the system of Indian cotton duties should be considered afresh when the fiscal relationships of the various parts of the Empire to one another and to the rest of the world came to be reviewed at the close of the war.

The new regulations mean that Indian manufacturers have now protection amounting to  $7\frac{1}{2}$  per cent, and the opinion has been expressed this week, in Manchester, by a leading authority that it will now be impossible to export coarse and even many medium yarns and cloths to India. It is understood that the situation will be considered tomorrow at a meeting of the India section of the Manchester Chamber of Commerce, but it is not probable that any big agitation will take place in Lancashire on this occasion. The best will have to be made of the position of affairs, and cotton manufacturers in this country will have to center more and more upon the production of fine goods which cannot be made in Eastern countries.

### British Cotton Trade Research.

The surplus funds, which are said to amount to about £1,500,000, of the Cotton Control Board, are proving to be of considerable use in furthering certain desirable objects connected with the Lancashire cotton industry. For many weeks the operatives who are unemployed have obtained benefits from this source, and it is now announced that the Cotton Reconstruction Board has decided to make a grant to the British Cotton Industry Research Association of £200,000. A sum of £50,000 will be paid at once, and the remainder of the money will be contributed during the next five years, on the basis of £30,000 a year. The Research Association is now preparing to carry on extensive operations at the Shirley Institute which has been established at Didsbury, near Manchester. Many people are of the opinion that in the past sufficient time and money has not been spent on research work relating to cotton manufacture, and big efforts are now being made to bring about improvements, both in machinery and methods of production.

### Water Competitive Lumber Rate Upheld.

Washington, March 28.—[Special.]—The recent decision of the Interstate Commerce Commission in the "water competitive" rate case is gratifying to the lumber producers of the South as well as to the consuming public on the Atlantic coast. It is an illustration of the service rendered to the public by the Commission in protecting the rights of the public. The vision of a group of traffic officers is often less broad and far-seeing than that of a general judicial and administrative organization such as the Commission has come to be.

For 20 years the so-called "water competitive" rates have been in effect on lumber from these Southern territories to the East. Trade conditions have centered about them. The Commission found that the old rates were not unjust or unreasonable in any particular, and that they were rates profitable to the carriers. It declined, therefore, to interfere with long-established custom and practice because of temporary conditions.

The decision means that rates on lumber and lumber products from points in Southern Virginia, North Carolina, South Carolina, Georgia, Florida and Eastern Alabama to points in Maryland, Delaware, Pennsylvania, New Jersey, New York and New England will remain as they have been, and that no further burden will be imposed on the large Eastern cities and smaller communities where, just now, the great cry is for cheaper building materials to relieve the very serious housing situation.

## NO TRADE WITH RUSSIA NOW.

**America Warned Against Establishing Commercial Relations With Lenine's Government—All Such Alliances Simply a Cloak for Bolshevist Propaganda.**

New York, March 25—[Special.]—"Great Britain entered into a commercial treaty with Soviet Russia more to check the spread of Bolshevist propaganda in India than in the hope of doing any great amount of business," said Jacob H. Rubin, once a Socialist leader in Milwaukee, who recently returned to this country from Russia disavowing Bolshevism, and declaring his purpose of giving lectures against it all over the United States.

Mr. Rubin spoke here in Town Hall before an audience that applauded his attacks upon Bolshevism as well as upon Communism, and all other "isms" that have their roots in the doctrines of Karl Marx. Mr. Rubin made no attempt to distinguish between Socialism and Bolshevism, declaring that no Socialist could be a patriot, or loyal to any country, because all Socialists were believers in the "Internationale."

"I warn America against entering into trade relations with Lenine's Government," said Mr. Rubin. "Russia has little to sell and little desire to buy of other countries. The establishment of commercial bureaus in other countries offers the best cloak for the spread of Bolshevist doctrines and this is the purpose of Lenine. Despite his promise to Lloyd George that he would be 'a good boy' he still believes firmly in the international rule of the proletariat, and he and his assistants are still working toward that end.

"The purposes of Soviet Russia are to destroy the capitalistic form of government wherever it occurs, and to erect in its place the communistic form, whereby individual effort will be eliminated, free trade abolished, the means of production of private individuals confiscated, private property requisitioned, and all lands and real property nationalized. The nation shall rule not only politically, but economically and commercially.

"Therefore, any business done at present with any corporation or individual in Soviet Russia is a subterfuge, because the Government controls with an iron hand all sources of production. The Government of Soviet Russia is the sole owner of every industry, shop, factory, and store; any individual attempting to transact business is considered a criminal, and is subject to a jail sentence.

"Business with Soviet Russia today means trade with Lenine's Government and is bound to help the plans of the men who have established the most cruel dictatorship in Russia ever known in the history of that country. So far as Lenine's promises to Lloyd George are concerned, we have the Treaty of Brest-Litovsk by which to judge the pledges of the Soviet.

"The Russian leaders are willing to promise anything at the moment when their rule is threatened with destruction. They are ready to accept any conditions imposed upon them in order to help them get past what they consider a critical period, and to satisfy the clamoring of 90 per cent of the Russian people who are not communistically inclined."

Mr. Rubin said from his personal observations in Russia and his close association with the leaders of the Bolsheviks, he would be ready to believe Lenine had reformed when the Soviet leader confessed to the world his multitudinous crimes, made what restitution he could, denounced the "Internationale," and surrendered his Government to a truly representative group of Russians, chosen after the assembling of a Constituent Assembly.

He repeated what has been already told of conditions in Russia, declared that freedom of the press and of speech were entirely unknown, told of the "Red Terror" that kept Russians in a constant state of fear of death and imprisonment, and amused his hearers by describing a typical day in a Russian factory under the Soviet, which consisted of everything except work. This, he said, was a lost art under Soviet rule, for all incentive to individual effort had been removed.

Mr. Rubin was in Russia when Washington Vanderlip was granted his enormous concessions by Lenine. He said these were given Vanderlip with no other idea than to enlist commercial support for the aspirations of the Soviet and to open new channels for propaganda.

## Sugar-Cane Industry Promoters Hope to Duplicate Success of Sweet Potato Production Methods.

Jackson, Miss., March 25—[Special.]—Following upon the heels of the revolution which was wrought in the sweet potato industry by extension forces operating in co-operation with the Federal and State Agricultural Departments, who put into effect a standardization of methods of production which resulted in making famous the Nancy Yam throughout the country, plans are being formulated to proceed along similar lines in applying this same method as a basis for experimenting in the sugar-cane industry throughout South Mississippi.

Promoters of the sugar-cane industry scheme are hopeful of the success of that production, and Walthall county is taking the initiative in the movement by erecting a community plant, and it is proposed to erect similar plants throughout the Southern section of the Commonwealth. These plants, according to those active in the sugar-cane program, may be operated in connection with sawmills or grist mills, which eliminates the necessity of erecting a special mill for the molasses output and affords an economical means of developing the sugar-cane product. It is also hoped that these community mills will be established through a method of centralization in convenient centers for the carrying on of this work. Hattiesburg is proposed for the first centralized plant.

It is also planned to adopt smaller containers than the minimum quart which is now being used for the molasses, and a standard label for the production result. Besides the proposed label and container adoption, according to the promoters, a more equitable and more uniformity of production is planned to parallel the success of the sweet potato with that of the sugar cane.

## Nearly \$2,000,000 in Rice Exports for January.

Lake Charles, La., March 26—[Special.]—During January the United States exported to foreign countries, exclusive of Porto Rico, 399,020 pockets of rice for \$1,939,612, bringing the total exports of the season of 1920-1921 up to 1,533,269 pockets, according to a report just issued by F. B. Wise. This is about 1,000,000 pockets less than the exports of last season during the same period. It is twice as much heavier as was exported during the same period two years ago. The exports of January compare with those of last December, totaling 525,653 pockets.

Germany continues to be the heaviest purchaser. During January she bought 127,205 pockets, or nearly one-third of the total exports, and paying for this quantity \$477,868. Greece bought 48,818 pockets, paying \$367,449, showing that Greece is buying a better quality of rice. Denmark bought 35,747 pockets for \$196,421. France purchased 28,324 pockets for \$170,335. England purchased 17,134 pockets, Dutch East Indies, 20,000 pockets, and Mexico, 11,537 pockets.

The United States continues to import Oriental rice. During January, 4,282,780 pounds of rough, 30,961 pockets of clean and 873 pockets of brewers' came into the country.

## \$16,000,000 in Improvements for Mexican Ports.

Monterey, Mexico, March 23—[Special.]—It is planned by the Mexican Government to make improvements to harbors and ports on the Pacific Coast at an estimated cost of 32,000,000 pesos, equivalent to \$16,000,000 American money, according to official advices received here from the City of Mexico. It is stated that Col. E. K. Smoot, an American who built the breakwater and wharves at Manzanillo, has been given the contract for the proposed additional extensive improvements that are to be made at Manzanillo, Guaymas and Mazatlan. Further work at Manzanillo will include the removal of 1,800,000 cubic yards of rock in the center of the harbor and filling in the lagoon. This will make of Manzanillo a sanitary seaport.

At Mazatlan it is planned to build a breakwater and piers. Steamers at present have to stand out a mile or two and discharge and receive freight and passengers by lighters and small boats. The harbor will be dredged to gain depth for the deepest draught vessels.

The Guaymas harbor improvement contemplates a breakwater and more wharves and piers.

## Silver in the New Era

[The following letter to the Editor of the London Daily Telegraph from Mr. Morton Frewen, well-known political economist of England, is an interesting presentation of the relationship existing between gold and silver as standards of value, with particular reference to the exchanges of the East.—Editor Manufacturers Record.]

By MORETON FREWEN, London.

To the Editor of the Daily Telegraph:

In a recent letter which you did me the honor to publish, and in which I attributed the present world malaise to the debacle in the Eastern exchanges, I pointed out that leading financiers, such as Baron Alfred Rothschild and Lord Goschen, had warned us, in language that seemed at that time greatly exaggerated, that we ought to expect such results as the present to follow such causes. I have a letter from a friend whose business judgment is reliable, and who writes:

"I do not understand foreign exchange problems, and am now too old to learn. The explanations you advance, even when fortified by your 'index numbers,' leave me cold, but what you quote from Alfred Rothschild and Goschen is good enough for me. I would advise you if we are to get any farther, to rely less on books and on theories of exchange and more on such authorities as these. When men of great eminence prophesy well in advance of the only three great falls in silver 'look out for great financial troubles,' and each time the trouble comes, that makes up my mind for me. You need not trouble me with your learned reasons, which frankly bore me."

And as this is, I expect, more or less the mental condition of the man on "the bus," I should like to put on record two very distinguished sons of Israel when gold monometalism began to be first thought of. In 1871, encouraged by the great abundance of the new gold coming from the New World, a bankers' conference met in Paris to consider a general demonetization of silver. Baron Rothschild, the head of the great French house, delivered a speech of strong disapproval. He said:

"The simultaneous employment of the two precious metals is satisfactory, and gives rise to no complaint. Whether gold or silver dominates for the time being, it is always true that the two precious metals concur together in forming the monetary circulation of the world, and it is the general mass of the two metals combined which serves as the measure of value of things. The suppression of silver would amount to a veritable destruction of values without any compensation. It would mean the destruction of a portion of the world's capital. It would spell ruin."

Two years later Lord Beaconsfield, speaking at Glasgow, said:

"I attribute the monetary disturbance which has occurred, and is now to a certain extent acting very injuriously upon trade—I attribute it to the great changes which the Governments of Europe are making in reference to their standard of value. Our gold standard is not the cause of our commercial prosperity, but the consequence of that prosperity. It is quite certain that we must prepare ourselves for great convulsions in the money market, not occasioned by speculation or any of the old causes which have been alleged, but by a new cause with which we are not sufficiently acquainted."

At that time the Transvaal gold field had not yet been discovered, nor what was destined to become equally important, namely, the potency of weak solutions of cyanide of potassium in recovering gold from tailings dumps, and which was to make the operation of extremely low-grade ores profitable. The sheer accident of these two discoveries was destined between 1870 and 1900 to increase the annual supplies of the yellow metal from less than twenty millions to almost a hundred millions, and yet, notwithstanding this prodigious and quite unprecedented expansion, the level of the world's prices fell from index number (Sauerbeck) 110 in 1873 to 63 for 1896. Does anyone today question that this debacle in prices was caused by the general "disinherison" of silver—from the closing of all the world's mints to the free coinage of silver? It is little wonder that Baron Rothschild had declared in 1871 "the suppression of silver \* \* \* would spell ruin."

### A Report of 1888.

I have already quoted from Professor Walker's important speech at the dinner given by Sir William Houldsworth in 1894. At the same dinner Mr. William Lidderdale, the Governor of the

Bank of England, who had carried the Bank and the "City" through the great crisis of '91, said:

"It is strange that England, which has advanced such immense amounts of capital to foreign countries and to her own colonies, all dependent largely on the value of their products for the means whereby they could pay their debts, should still so persistently and apparently so blindly have supported a financial policy calculated to render it difficult for her debtors to keep faith."

Let me also put on record from the Journal of the Royal Agricultural Society for 1894, and from a paper by Mr. W. E. Bear, the well-known editor of the Mark-lane Express, these words:

"The weekly average of the price of wheat has been as low as 17s. 6d. per quarter, a price absolutely ruinous to growers who depend mainly on wheat for a living, unless they possess some such enormous currency advantage as the farmers of the Argentine Republic and they alone enjoy. 'The enormous advantage' being at the time three paper dollars for one gold dollar, the paper dollar 'possessing nearly as much purchase power for all they (the farmers of the Plate) require as it ever had.'"

In the best paper on the subject of Oriental trade and exchange ever read, Mr. T. H. Whitehead of Hongkong (Royal Colonial Institute, February 12, 1895), pointing out how Lancashire's leading trade was being bodily transferred to the Far East, presented these figures: The exports of cotton yarn from India increased from less than £8,000,000 in 1876 to £192,000,000 in 1892, an increase of 2364 per cent, while exports of British yarns have only grown from an average of £207,000,000 in 1873 to £228,000,000 in 1893, or less than 10 per cent. For the last 11 years it will be found that the annual profit realized on the paid-up capital of cotton-spinning companies in the Oldham district has averaged about £917 per company, or 2¼ per cent per annum. The Manchester Chamber of Commerce, after a very prolonged inquiry, resolved in December, 1888, that "the principal cause which has enabled the Bombay spinners to supersede those of Lancashire in exporting yarn to China and Japan is the great fall in Eastern exchange since 1873."

If a fall of less than 25 per cent between 73-88 in rupee exchange had such fell results to Lancashire labor, what is going to be the result in the case of the "penny mark," the skilled labor of modern Germany, perfectly equipped, working, as now, for seven marks an hour during a 44-hour week? What earthly chance is there in the days at hand for white labor against Hun labor? To fight such a competition as this with either "free trade" or with tariffs is perfectly hopeless. The German export duties our new War Minister has invented—a duty collected in dollars or sterling—goes a little way; it may conceivably collect a hundred million, or even two, but if we are to capture the trades of Asia, and indefinitely expand these, we must stabilize our exchanges with that half the human race.

### Effects of Policy.

And pray how stabilize? By calling France and the United States into counsel; both are countries hardly less concerned than we are to get the protection afforded by high exchanges against the "dump" of the penny mark. It is time that a new generation vitally concerned took to heart the finding of the Royal Commission on Gold and Silver, which, after three years' investigation, issued its report in 1888. Section 192 of that report, signed by every member of the Commission, reads as follows:

"These considerations seem to suggest the existence of some steady influence in former periods which has now been removed and which has left the silver market subject to the free influence of causes the full effect of which was previously kept in check. The question, therefore, forces itself upon us, Is there any other circumstance calculated to affect the relative relation of silver to gold which distinguishes the latter period from the earlier? Now undoubtedly the date which forms the dividing line between an epoch of approximate fixity in the relative value of gold and silver and one of marked instability is the year when the bimetallic



system which had previously been in force in the Latin Union ceased to be in full operation, and we are irresistibly led to the conclusion that the operation of that system, established as it was in countries the population and commerce of which were considerable, exerted a material influence upon the relative value of the two metals."

The signatures to this profession of belief in the effectiveness of Calonne's law governing exchange were as follows: Lord Herschell, Sir Louis Mallet, Sir John Lubbock, Mr. A. J. Balfour, Mr. J. W. Birch, Mr. Chaplin, Sir C. Fremantle, Sir David Barbour, Sir Thomas Farrer, Sir William Houldsworth, Mr. Leonard Courtney, Mr. Samuel Montagu. Well might Lord Aldenham, governor of the Bank of England and an expert in exchange, if ever there was one—well might he write of the anonymous scoffers in an envenomed press as "those who endeavor by grotesque and burlesque argument to show that what had been done for hundreds of years was impossible, and that a system under which England had prospered was fatal to her prosperity, while that under which her prosperity was waning was the true source of her wealth."

Let me conclude on this note. Had our silver boom of a year ago been prolonged for at least another decade, and none of us contemplated the Hari-Kari of the French and American meltings of their coined silver—had Bombay and Calcutta, had Singapore and Hongkong continued with high exchange to buy our goods voraciously, then the eastward drain of our western gold, and especially of America's, would have, and in at most three years, given us a 10-shilling dollar. And that, indeed, when the present "frozen exchange" with India has thawed out, is what awaits us today if nothing "international" to stay the white plague is achieved. A loss of 250,000,000 sovereigns to India will leave sterling, and still more the dollar—where? Look at the percentages of the specie drain to India since light-heartedly and in complete ignorance Mr. Gladstone tampered with her currency in 1893—the drain for the two previous centuries having been roughly one-fifth gold to four-fifths silver:

	P. C. of gold.	P. C. of silver.
1886-1890 .....	24.18	75.82
1891-1895 .....	01.54	98.46
1896-1900 .....	47.44	52.56
1901-1905 .....	66.01	33.99
1906-1910 .....	61.22	38.78
1911 .....	73.58	26.42
1912 .....	87.70	12.30

### Engineering Societies Behind Nolan Patent Office Bill.

New York, March 26—[Special.]—The Engineering Council of the Federated American Engineering Societies will seek to have the Nolan Patent Office Bill passed as soon as possible after the opening of the special session of Congress, it has been announced here. Failure of the measure at the last session is attributed to the Federal Trade Commission section which is opposed to the Council.

The section referred to would give the Commission the power to receive assignments of patents and administer inventions of governmental employees. The Council contends that it is an entering-wedge for further legislation to empower the Commission to receive patents from nongovernmental inventors.

This, the Council contends, would discourage private development of patents and decrease the incentive to produce inventions. It is said that the Nolan measure is an imperative necessity to relieve conditions now existing in the Patent Office.

### "Cotton Facts."

The forty-fifth annual edition of "Cotton Facts" has been issued as of December, 1920, by the Shepperson Publishing Co., Cotton Exchange Building, New York. Compiled and edited by Alfred B. Shepperson, it has been revised and enlarged by C. W. Shepperson-Bull. This valuable manual of more than 160 pages presents the figures from official and reliable sources of the crops, receipts, exports, stocks, home and foreign consumption, visible supply, prices, and acreage of cotton in the United States and other countries for a series of years. Besides, there are given cotton mill statistics of the United States, Europe, India, etc., reports of condition of growing cotton crops, issued by the United States Department of Agriculture; the cotton acreage and yield of each State and county in the South, etc. The book is well bound in cloth, and its size permits it to be conveniently carried in the pocket.

### Program Announced for Second World Cotton Conference.

Plans for the Second World Cotton Conference, to be held in Liverpool and Manchester from June 13 to June 22 of this year, are now being brought into final shape. A meeting of the Executive Committee, held in New York recently, rearranged the voting groups composing the Conference, and the program of the Conference, which has been in the hands of a subcommittee, was announced.

This program is very comprehensive, covering every phase of the cotton industry. Among the important papers to be read are the following:

"How Can Production Best be Increased?" David R. Coker, Hartsville, S. C.

"Cotton Growing Within the British Empire," W. B. Himbury, British Cotton Growing Association.

"Universal Standards for American Cotton," William R. Meadows, Department of Agriculture, Washington, D. C.

"The Purchase and Sale of Cotton," A. Bryce Muir, Liverpool Cotton Association.

"Financing Cotton Importing," Sir James Hope Simpson, J. P., British Bankers' Association.

"Financing American Cotton for European Use," Willis H. Booth, New York, N. Y.

"Hours of Labor in the Textile Industry," Albert Thomas, Director of International Labor Office, Geneva, Switzerland.

"Cotton Warehousing: A Growing Need," Captain William P. White, Lowell, Mass.

"The Possibilities of Exact Reporting and Forecasting of Cotton Crops," Dr. W. Lawrence Balls, Sc.D., Fine Spinners and Doublers' Association, Manchester, England.

"Needed Reforms in Compressing, Ginning and Baling," Albert L. Scott and F. S. Blanchard, Boston, Mass.

"The By-Products as a Stimulus to Production," Louis N. Geldert, Interstate Cotton Seed Crushers' Association, Washington, District of Columbia.

"Research Problems of World Import," Dr. A. W. Crossley, C.M.G., C.B.E., LL.D., F.R.S., Director of the British Industry Cotton Research Association, Manchester, England.

### Manufacture of Casinghead Gasoline an Important Industry in Okmulgee Field.

Okmulgee, Okla., March 28—[Special.]—Extraction of gasoline from natural gas under high pressure has come to be one of the important industries of the Okmulgee oil field, and a survey of the field just completed shows that there are 53 separate plants in Okmulgee county engaged in the manufacture of casinghead gasoline. Of the total, 49 plants are of the compression type, and four are of the absorption type. All of these plants are scattered about within a radius of 25 miles from Okmulgee, and practically all of them are operated by Okmulgee companies, and the product of the plants is sold through Okmulgee as a center.

The 53 casinghead plants in this field represent an investment of \$6,000,000, furnish employment to about 200 men, and the total annual output of the plants is in excess of \$5,000,000. Plants of the compression type vary in cost from \$240,000 to \$50,000, according to their size. There is a total of 108 units in the 49 plants of the compression type in this field, the various plants being equipped as follows: One 8-unit plant; two 6-unit plants; two 5-unit plants; four 4-unit plants; twenty-two 2-unit plants, and eighteen 1-unit plants. Besides the engines and compressors of each compression unit, each of the various plants is equipped with gathering lines, storage tanks, cooling towers and similar equipment.

Several new plants are to be built in this field during the present year, and it is expected that not less than 60 plants will be in operation in the Okmulgee field by the close of 1921. Under normal conditions, the output of the plants in the Okmulgee field is 100,000 gallons of high-grade commercial gasoline daily. The product of the plants is blended with other gasoline before being distributed to consumers, and is an excellent fuel if properly blended.

# NEWS AND VIEWS FROM OUR READERS

[Publication in this department of letters from our readers does not mean that we either approve or disapprove the views expressed. We believe in a full and frank discussion of the mighty questions of the hour, for only in this way can the truth be found. Therefore we often publish letters with which we do not agree.—Editor Manufacturers Record.]

## Seeking an Output for Fuller's Earth and for Lime Marl.

W. A. WILLEROY, Attorney at Law, West Point, Va.

I have been noting with interest and pleasure a good many articles of yours recently. I have also read with great interest the newspaper report of your editor's address before the National Editorial Association, and take the liberty of writing to you in regard to one article that you mention therein, namely: That the South produces 100 per cent of the country's Fuller's earth.

I have a large farm in this county that has millions of tons of Fuller's earth on it, and has a frontage of about two miles on a stream navigable by boats that can go to any of the Atlantic Coast cities.

I am taking the liberty to write you and ask if you will inform me as to what Fuller's earth is used for; what its approximate value is, and how and where it can be marketed. It occurred to me that you might be able to assist me in getting some sort of manufacturing plant started on my place.

The farm is so situated that the plant could set immediately on the banks of the river, and boats could load and unload directly into the plant, and transport goods to any port along the Atlantic Coast. It is only 30 minutes' run from the farm to where the Southern Railway crosses the river, and shipments could easily be made in carload or less than carload lots.

There are also millions of tons of lime marl on my place, known to have commercial value, and to be excellent for agricultural purposes, which has been mined and sold in limited quantities in past years, and has also been used quite extensively locally.

In drying and sifting this marl, there is separated from it considerable bone and small dark stones called coprolites. These coprolites analyze about 45 per cent phosphorous, which makes one ton of them worth about as much as three tons of 15 per cent phosphoric acid. The bone also, as you of course know, has high fertilizing values. In mining large quantities of marl, the bone and coprolites that would be gotten out as siftings would be a considerable by-product.

It has occurred to me many times before that there might be established a plant that could handle the Fuller's earth, marl, bone and phosphorous. And each would add to the profit by reducing the expense on the other, for the Fuller's earth is immediately on top of the marl and has to be removed in getting to the marl.

## In Defense of Railroad Chief Engineers.

JOE L. SWANSON, Fairbanks, Morse & Co., New Orleans, La.

The article, "A Railroad Critic Who Needs to Study More," published in your issue of March 10, has been read, reread, and reread. It seems that the gentleman, having conducted many investigations for the Fuel Administration during the war, thereby being intimately associated with the Government, as well as the railroads, would be better posted on the subject of his letter to you of date February 11th.

Conservation or waste is a question of almost unlimited magnitude and is a matter of greatest importance in which efficiency must play a leading part. But since the word "efficiency" has been so abused in recent years, I am prone to suggest that it appears wise for the railroad officials to ponder long and well ere they decide on whose "efficiency prescription" they shall apply to the ailment.

The application of "efficiency" as applied by some is a dangerous thing; for instance, I know of a case where a certain "efficiency expert" investigated a plant and told the owner he (the expert) could save him a large sum of money in operating cost. He would install a certain type of boiler which would save 25 per

cent in fuel; a particular kind of grates would save 15 per cent in fuel; a superheater would save 10 per cent in fuel; a feed-water heater would save 15 per cent in fuel, and a high-efficiency steam engine would save 25 per cent in fuel; then by rearranging the machines in the plant and thereby reducing the friction load, would save still another 15 per cent in fuel. A total fuel saving accomplished of 105 per cent. Remarkable! Possibly any or all of the offered improvements would have been beneficial, but this is only one case of many where humble "efficiency" was led to the slaughter.

I have the pleasure of numbering among my acquaintances some railroad "chief engineers" who are capable of selecting common-sense guarantees in preference to wild-cat paper guarantees, the latter so often wrapped in the shroud of "high efficiency." I have not had the misfortune to meet "chief engineers of large systems" who do not know what a feed-water heater is. It is possible (but does not seem probable) that this ignorance might exist among "chief engineers of large systems," but at any rate the criticism carried in the letter published in your issue of March 10 appears entirely too broad and must have been conceived in scant knowledge and born from the womb of disappointment.

The history of railroad building and operation in the United States is interesting reading. It tells of how "chief engineers of large systems" (and small ones, too, for that matter) have overcome seeming insurmountable obstacles. It tells of how these "chief engineers" (and I am not and never was one of them) have converted, in many instances, two streaks of rust into two shining rails of bustling commerce, transporting our agricultural, natural and manufactured products to the markets of the world. Further, to aid this system of transportation, they have bridged the chasm and ploughed through the mountain's belly. Further, to accomplish these little nothings, "chief engineers" have died of exposure, disease and exhaustion. Pity if one among them does not know what a feed-water heater is!

We are passing through a reconstruction period, and many of the existing conditions can be connected with a specific beginning, and the railroad situation is one of the above-mentioned conditions. Let us hope that the time is not far distant when the railroads will be operated economically, serviceably and profitably (to the owner), but, in the meantime, will it accomplish anything to pick on the railroad official whose hands are tied and to cast humiliating remarks at the "chief engineers of large systems" who probably do not know what a feed-water heater is?

[The letter to which Mr. Swanson refers was editorially criticized, as in our opinion, without justification, and we are glad to have this confirmation of our position.]

## Information Wanted About Carbon Black.

W. J. RYAN, Secretary Manufacturers' Committee,  
Chamber of Commerce, Holdenville, Okla.

We are interested in knowing something about the making of carbon black. If you can give us the information, we will appreciate it greatly.

We have one of the best gas fields in Oklahoma, and have no market for our gas, and we have been told that the making of carbon black from gas is very profitable.

Thousands of farmers in North Carolina are signing the co-operative cotton and tobacco marketing contracts. A great campaign for signatures is in progress. The headquarters of the central organization committee is in Raleigh, and the campaign will continue until at least 75 per cent of all growers have signed, the contract being for five years. The central committee says this is "the new declaration of independence," and that it means the dawn of a better day for North Carolina.

# THE IRON AND STEEL SITUATION

## Demand for Steel Increasing.

Pittsburgh, Pa., March 28—[Special.]—Demand for steel products continues to increase, though at a very slow rate. The total of incoming business, including entirely fresh orders, specifications against old contracts and releases on orders, shipment of which had been suspended, is not equal to the present production, so that further increase in demand or further reduction in production is necessary to put the situation on a stable basis.

The demand for steel is being carefully analyzed by sales managers of steel companies to enable them to determine just what is the basis. The business is not traceable to the season of the year, but is rather a reaction from the extremely reserved policy consumers maintained for three or four months, while they were reducing their inventories. The buying today does not represent a spring buying movement. That is still to come, if there is to be a spring movement, as it is expected there will be. The lead will probably be taken by the oil industry, beginning with the Texas field.

## Steel Prices Steady.

It is now almost two months since the independent steel makers began to break away from the Steel Corporation or Industrial Board price schedule, and the market shows much more steadiness than might be expected, considering the fact that the independents, with the prices they have been quoting, have been unable to build up a good operation. In bars, shapes and plates in particular, there has been practically no further decline for several weeks, the market still being quotable at 2 cents for bars and 2.10 cents for shapes and plates, in carload lots, with reasonably good specifications. Concessions would be made on larger lots, but perhaps not altogether as great concessions as were possible a month ago.

In sheets, the 3.85 cents price for black sheets attained over a week ago still represents the market. Galvanized sheets have softened a trifle more, since carload lots can be had at 4.90 cents, against 5 cents a week or two ago. Blue annealed sheets are altogether inactive, but seem to remain at about 3 cents, except heavy gauges that would come under the plate mill schedule.

Standard steel pipe has now had its break from the Industrial Board or Steel Corporation price schedule, being the last steel product, except tin plate, to yield, just as it was the last steel product to come down to the Steel Corporation price after the flight of the independent market.

The Steel Corporation continues to maintain its prices and wage rates. The trade regards it as practically certain, say with nine chances in ten, that the Steel Corporation will reduce both prices and wages in the not distant future.

## Operations.

Production of steel ingots by the Steel Corporation last week was at about 45 per cent of capacity, against 49 per cent the preceding week. Independents continue to operate at an average of about 20 per cent. This makes a production rate of about 16,000,000 tons a year, 10,000,000 tons by the Corporation and 6,000,000 tons by the independents. That is barely more than half the average rate of production in 1912 and 1913, the two best tonnage years before the war, but it is greater than the production in any year prior to 1905.

## Demand in Detail.

A summary of the demand in detail, at this time, may be of interest. Of all the steel products the heaviest demand is for tubular goods, particularly oil country goods, with standard steel pipe a close second. The demand is relatively larger for distribution and miscellaneous manufacturing than from the large users. The agricultural implement trade is particularly slack. There is a moderate demand for concrete reinforcing bars.

Plate demand is of moderate proportions, but appears light when compared with capacity, because capacity was greatly increased during the war on account of the special demand existing at that time. The expectation is that some of the plate mills will be dismantled, the buildings, engines, etc., being utilized for other purposes.

Structural shape demand is particularly light, just as is the

case with plates used for structural purposes. Sheets are in very fair demand for building purposes, while for automobile use the demand is increasing, and there is very fair activity in the consumption of electrical sheets.

Wire demand is better than demand for other steel products in general, but is light considering the season of the year. There is much more call for nails than for barb wire, fabricated fences, etc.

Tin plate stands altogether in a class by itself, there being a price deadlock. Cannerymen are delaying to the last moment the purchase of cans, and the canmakers are following suit, delaying the purchase of tin plate. The demand thus far this year has been unprecedentedly light.

## Pig-Iron.

The basic pig-iron market has passed from the merchant furnaces to the steel works that have surplus stocks to dispose of. The steel works have been offering basic iron at \$23, valley, for several weeks past, and have lately made some sales at this price, while the merchant furnaces adhere to their \$25 quotation and are going to allow the steel works iron to be absorbed, not attempting to meet the competition. Foundry iron is off \$1, being obtainable at \$25, valley. Bessemer remains nominally at \$27, valley.

## Little Life in Birmingham Market.

Birmingham, Ala., March 28—[Special.]—The numerous small lot sales of pig-iron being made in the Birmingham district still fail to aggregate sufficiently to warrant the cessation of complaint of a dull market. The pig-iron production is still down to the minimum, two independent companies each having a furnace making foundry iron in operation. One of these could be blown out and the company still be in position to meet the demand in the market.

There is a slight reduction in the amount of iron on the yards, but the rate of reduction is so small that it would take a long time to wipe out the tonnage here if there was no improvement in the demand. Quotations for pig-iron are weak, sizable orders commanding \$25 per ton, No. 2 foundry, while small-lot orders in many instances bringing \$26.50 and even \$27.50. The cast-iron pipemakers are still disappointed at the lagging market, and these interests are buying in small lots as compared to what they formerly did. Several of the sanitary pipe-making plants in the Birmingham district, at Anniston, Gadsden, North Birmingham, Birmingham and Bessemer, are melting a considerable amount of pig-iron, there being steady business anticipated as building activities come into sight. The pipemakers, smaller pipe in particular, believe that an era of prosperity is now about to set in as announcements of a number of buildings are given out. In Anniston, where this industry is very prominent, many men are being re-employed and sanitary pipe production steadily returning to normal. The cast-iron pipe people had anticipated many specifications from various cities throughout the country for the larger pipe and are sorely disappointed.

Steel mill operations are still holding on around 50 per cent capacities, everything considered. The Tennessee Coal, Iron & Railroad Co. received an export order for steel shapes on Monday last and the following day started up the plate and blooming mills of the Fairfield Works. The starting up of the departments of the big works, giving employment to several hundred men, had a very wholesome effect. The statement was made from an authoritative source that as long as there was business in hand or in sight operations would be maintained and the working forces kept intact.

Considerable steel rail, plates and other shapes are being handled down the Warrior River from the Birmingham district now, much of it to go on ships which will sail shortly for foreign countries from the port of Mobile.

Coal production during the past week showed a little improvement, mines of the Woodward Iron Co. producing a goodly quantity of coal. The mine workers for this company returned to work gladly.

The construction of the coal storage plant by the Government, at Mobile, which will be started on shortly, will mean much to



the coal trade inasmuch as upwards of 25,000 tons of coal can be stored at all times, which will permit of regular movements.

The coke market continues dull. The production is being held down still to the minimum.

The scrap iron and steel market in the Birmingham district shows positively no change; the market is just as dull as it could be.

Pig-iron and iron and steel scrap quotations in the Birmingham district are as follows:

#### PIG-IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$25.00 to \$27.50; No. 1, foundry, 2.25 to 2.75 per cent silicon, \$26.25 to \$28.75; iron of 2.75 to 3.25 per cent silicon, \$27.50 to \$30; iron of 3.25 to 3.75 per cent silicon, \$28.75 to \$31.25; iron of 3.75 to 4.25 per cent silicon, \$30 to \$32.50; charcoal iron, \$45.

#### OLD MATERIAL.

Old steel axles.....	\$19.00 to \$20.00
Old iron axles.....	30.00 to 32.00
Old steel rails.....	14.00 to 15.00
Heavy melting steel.....	14.50 to 15.00
No. 1 R. R. wrought.....	15.00 to 16.50
No. 1 cast.....	18.00 to 20.00
Stove plate.....	17.00 to 18.00
Old car wheels.....	19.00 to 20.00
Old tramcar wheels.....	18.50 to 19.00
Machine-shop turnings.....	8.00 to 9.00
Cast-iron borings.....	8.00 to 9.00

### Weekly Production of Coal.

The report of the United States Geological Survey on the production of coal during the third week of March says that the production of soft coal, including lignite and coal coked, is estimated at 6,468,000 net tons, a decrease for the week of 433,000 tons, or 6 per cent. Anthracite production was 1,688,000 tons, a decrease of 238,000 tons. The production of beehive coke for the week was 118,000 tons, a decrease of 44,000 tons.

### Using More Oil for Producing Electricity.

New York, March 25—[Special.]—An increase of 18.4 per cent in consumption of fuel oil for the production of electricity by public utility plants is shown by figures given out here by the American Petroleum Institute. In 1919 11,050,000 barrels were used and in 1920 13,080,000 barrels. An increase of 13.6 per cent, in the use of gas for the same purpose is shown. The 1920 figures are 24,300,000,000 cubic feet. The total production of electricity in public utility plants in 1920 was 439,000,000 kilowatt hours, 37.6 per cent, of which was produced by water power. California leads in the use of fuel oil, with Texas next. Other large consumers are Florida, Kansas, Louisiana, Missouri, Oklahoma and Rhode Island.

### Crude Oil Production Shows Gain.

The American Petroleum Institute estimates that the daily average gross crude oil production in the United States for the week ended March 19 was 1,259,215 barrels, as compared with 1,245,125 barrels for the week ended March 12.

The estimated daily average gross production of the Mid-Continent (light oil) field, including Oklahoma, Kansas, North Texas, Central Texas and North Louisiana, for the week ended March 19 was 649,005 barrels, as compared with 633,815 barrels for the preceding week, an increase of 15,199 barrels.

The estimated daily average gross production of the Gulf Coast (heavy oil) field was 109,130 barrels, an increase of 1870 barrels as compared with the preceding week.

The combined daily average gross production of the Southwest field was 758,135 barrels, an increase of 17,060 barrels.

Oklahoma Kansas shows a daily average gross production of 372,280 barrels, an increase of 14,315 barrels. North Texas shows an increase of 1850 barrels, Central Texas an increase of 1430 barrels, while North Louisiana shows a decrease of 2405 barrels.

The estimated daily average gross production of Wyoming and Montana was 54,080 barrels, as compared with 56,550 barrels for the preceding week, a decrease of 2470 barrels. All pools show a slight falling off with the exception of Elk Basin, which increased slightly.

### Huge Waste of Natural Gas.

Oklahoma City, Okla., March 28—[Special.]—That the waste of natural gas in Oklahoma in one year through defective pipe lines and transportation equipment and defective consumers' appliances amounts to \$275,000,000 is the statement of Dr. S. S. Wyer of the United States Bureau of Mines, who recently addressed a conference of gas producers and distributors called by the Corporation Commission. Dr. Wyer made his estimate on the basis of the value of artificial gas as a substitute for natural gas if natural gas were all gone.

Dr. Wyer predicted that many natural-gas companies of Oklahoma will fail in business if they do not take steps to stop the enormous waste. He said Oklahoma's gas, if properly conserved, should last for 25 years.

The conference was called to discuss whether or not the Commission's rule that requires the blowing of all commercial gas wells once each 30 days to get a volume test to report to the Commission should be modified gas men were of divided opinions. Dr. Wyer recommended that wells be blown once in three months.

### 362 Producing Mexican Oil Wells.

Monterey, Mexico, March 28—[Special.]—According to a statement just issued by the Treasury Department of the Mexican Government, there are 362 oil wells in Mexico now producing. The official figures show that the quantity of oil now being produced daily is approximately 600,000 barrels. There are 707 wells now in course of drilling.

Exports of refined petroleum decreased 25 per cent and exports of crude increased 21 per cent in the last year.

There are 184 wells producing more than 500 barrels daily.

### Delta Counties to Organize Co-operative Cotton Association for Warehousing and Marketing.

Jackson, Miss., March 25—[Special.]—News of the proposed organization of the Staple Cotton Co-operative Association in the Delta counties of Mississippi, Tennessee and Arkansas, with headquarters in Memphis, Tenn., has been received here, with plans of the association. Formal organization is expected to take place September 1, in time to handle the current crop.

Indications are now that at least 200,000 bales of long staple cotton will be represented in the Association, with the possibility of this number being increased to 300,000 before the organization is actually under way. Provision is made, however, for a minimum of 10,000 bales, so that the Association is certain to be launched next fall.

As soon as organization has been effected the Planters' Warehouse Corporation will be formed to enter a general warehousing business along the lines of other co-operative cotton marketing associations.

The association will have entire charge of the marketing of its members' cotton, which will be pooled and sold to best advantage by a marketing committee, with plenipotentiary powers. In addition to this feature, the organization will attempt to regulate production and to prevent its members from raising more cotton each year than can be sold at a profit.

At the beginning of each planting season information will be furnished its members on the cotton situation and suggesting how much acreage they should devote to the staple. In a situation similar to the present one attention would be devoted to food crops, and farmers would be able to find financial assistance through the warehouse receipts of the corporation organized as a part of the association.

The penalty of immediate expulsion is provided for members who do not live up to their contracts with the association. The association may also recover damages in court at the member's costs. Its founders say they are not planning to corner the long staple cotton supply, but that they are trying to assure stable returns for the cotton grower, in place of the present uncertain and dangerous economic situation. They declare that the organization will also help to stabilize the price of raw material to the manufacturer and will thus be an aid to him.

An organization of Mississippi Delta planters of a similar nature succeeded in exporting staple cotton for their own account early this year and made several large sales to good advantage.

# RAILROADS

## United States Court's Decision As to Railroad Employees' Pay.

Judge Samuel H. Sibley of the United States Court for the Northern District of Georgia, according to a report from Atlanta, last Friday denied the petition of former employees of the Atlanta, Birmingham & Atlantic Railway, who are now on strike, that Receiver B. L. Bugg, who is also president of the company, be required to take the question of wages to the United States Labor Board in Chicago for settlement.

The court's opinion was given orally, the judge stating that in some cases the Labor Board might be a better judge of questions of wages than a court would be, but in a case involving, as this case does, the proposition that the wages fixed by the Labor Board are so high that the railroad cannot pay them and continue to function, the question becomes a judicial one, and, therefore, entirely proper for the court to decide. No board or law, he went on to say, can take from the railroad company property without due process of law, nor can the Labor Board constitutionally fix wages so high that the railroad cannot operate.

Concerning the rights of the former employees under the Newlands Act, Judge Sibley held, it is stated, that the act was constitutional and affected the court's powers with reference to wages, and that the court ought not to reduce wages of men to whom the act applied without giving them a hearing after 20 days' notice, and that the act applied, as he saw it now, only to engineers and train crews. The judge declined to pass any order restoring the striking employees to their former positions, because this involved the rights of the new employees who had taken their places.

The hearing set for March 26 began last Saturday before Judge Sibley in Atlanta, he being assisted by United States Judges Evans and Clayton.

It is further stated that normal freight service on every part of the Atlanta, Birmingham & Atlantic Railway has been fully resumed; also the operation on time of daily passenger train service in each direction. Besides, it is said, a number of old and trusted employes have returned to resume work and that some of these have been accepted.

## Southern Pacific Extending in Mexico.

Empalme, Mexico, March 25.—[Special.]—Julius Kruttschnitt, chairman of the executive committee of the Southern Pacific Railway Co., accompanied by a party of officials of that system, has just finished a tour of inspection of the Southern Pacific Railroad of Mexico. During his stop here Mr. Kruttschnitt expressed himself as well pleased with the progress that is being made in the restoration of traffic of the line after several years of more or less interruption and interference, due to revolutionary conditions. It was stated that many American farmers who had located in the rich irrigated valleys of the Fuerte, Sinaloa and other rivers in the coastal region traversed by the railroad, have returned to their respective properties and are again producing large crops. Construction of the extension of the railroad from a point near Tepic to Orendain, 25 miles west of Guadalajara, is making slow progress, due to the big and costly engineering difficulties that must be overcome. An early settlement of the \$12,000,000 claim for damages which the Southern Pacific Railroad of Mexico has against the Mexican Government is promised.

## Director-General of Railroads.

James C. Davis of Iowa, formerly general counsel of the Chicago & Northwestern Railway Co., has been appointed by President Harding to be Director-General of the United States Railroad Administration to succeed John Barton Payne, who has occupied the position for a year, in addition to being Secretary of the Interior. Mr. Davis has been general counsel for the Railroad Administration and he took charge as Director-General immediately. He also succeeds Mr. Payne as agent of the President in legal cases originating from Government operation of the railroads. The President wrote to Mr. Payne a hearty expression of appreciation and gratitude for his services to the Government.

## New Plan of Through Freight Service.

A new method of conducting through freight service has been adopted by the Pennsylvania Railroad by running such trains on regular schedules. The new arrangement has been tried out for a month on eastbound traffic from Chicago, St. Louis and the Middle West to eastern terminals, and a corresponding schedule from New York, Philadelphia, Baltimore and other eastern points to western terminals has just been put into effect.

Records show that all through freight has thus been expedited, delivery being made from one to two or three days earlier and with increased dependability. The object, however, is to insure service according to the schedules rather than exceptionally fast train movement. Therefore, these freight trains are followed up just as passenger trains are kept moving.

This reorganization includes through movement of all perishable freight, livestock and non-perishable merchandise, but a somewhat slower movement for mineral and all other traffic. A daily "clean-up" is made at terminals by co-operation with shippers so that freight goes to proper assembling points and starts to its destination on the same day that it is received.

There are supplementary trains from other cities for freight in both directions which connect with the through trains at their terminals.

## Miscellaneous Freight Moving More Actively.

The car service division of the American Railway Association says that during the week ended March 12 cars loaded with revenue freight totaled 702,068, a decrease of 10,814 as compared with the previous week. It also was 117,261 cars less than in the corresponding week of 1920, but 802 cars more than in the same week of 1919.

The loading of merchandise and miscellaneous freight, including manufactured products, totaled 433,777 cars, an increase of 1883 cars over the preceding week, while those loaded with forest products totaled 52,484, an increase of 268. Decreases were reported in the number of cars loaded with grain products, livestock, coke, ore and coal.

In only the Southern and Allegheny districts did the number of cars loaded during the week exceed the number loaded the week before.

## North Carolina Drainage Association to Meet.

Chapel Hill, N. C., March 23.—[Special.]—The North Carolina Drainage Association, in co-operation with the North Carolina Geological and Economic Survey, is making plans for the eleventh annual convention of the Association, to be held in Elizabeth City April 12 and 13. Ex-Congressman John H. Small is president of the Association, and will preside at the sessions of the convention. Joseph Hyde Pratt, director of the State Geological Survey, is secretary. The program is now being arranged.

## Weekly Report from Southern Pine Mills.

New Orleans, La., March 19.—[Special.]—For the week ended March 18, reports from 139 mills of the Southern Pine Association indicates receipt of orders for the week amounting to 2761 cars of 59,886,090 feet, compared with orders received during the preceding week by 125 mills for 2764 cars of 59,951,160 feet.

The report for the week is as follows:

	Cars.	Feet.
Orders on hand beginning of week.....	9,644	209,178,360
Orders received during the week.....	2,761	59,886,090
Total.....	12,405	269,064,450
Shipments during the week.....	2,906	63,031,140
Orders on hand end of week.....	9,499	206,033,310

The shipments for the week were 4.29 per cent above production. Orders were .91 per cent below production, and 4.99 per cent below shipments. The actual production was 34.20 per cent below normal. Shipments were 31.38 per cent below normal production. Orders were 34.80 per cent below normal production. The decrease in "orders on hand" during the week amounted to 1.50 per cent.

# LUMBER AND BUILDING MATERIALS

## Vast Sums Involved in New Building in the South As Detailed Weekly in the Manufacturers Record.

The amount of money that will be expended in the fulfillment of construction contracts awarded during the month of March as shown by the weekly summary published in the MANUFACTURERS RECORD totals approximately \$25,361,576, while the sum representing contracts to be awarded on new projects announced during the month is approximately \$87,916,333.

For the week ended March 25 the contracts awarded involved the expenditure of \$7,121,496, and the contracts to be awarded totaled \$24,660,086. The summaries for the previous weeks are as follows: March 18, contracts awarded, \$5,264,562; contracts to be awarded, \$20,321,500; March 11, contracts awarded, \$6,766,270; contracts to be awarded, \$25,683,000; March 4, contracts awarded, \$6,200,248; contracts to be awarded, \$17,251,747.

The construction of bank and office buildings, business houses, church and school buildings, as well as buildings for associations and fraternal organizations, is proceeding at a great rate, as indicated by the amount of money involved in contracts awarded, and new projects announced for which plans are now being prepared and for which bids will be asked in the near future.

Similarly the construction of roads, bridges and paving work involves a large portion of the total in both contracts awarded and to be awarded. While many contracts were awarded during the past month for work of this character and the total is very large, the number of new projects announced indicates that this sum will be greatly increased during the next few weeks. Likewise sewers, drainage and water-works projects are being extensively developed in the various cities, towns and counties and large sums have been voted for this purpose and bonds will be issued and sold to pay for the work.

The amount of money involved in the construction of miscellaneous enterprises is also large. This classification includes garages, warehouses, cold-storage plants, theaters, oil refineries, etc.

The construction of apartment-houses in the various cities is progressing rapidly as new contracts are awarded, and within the next few months many more buildings of this character will be under construction, judging from the number for which plans are being prepared and those for which bids have already been asked.

The construction of dwellings in most of the larger cities is strikingly small, but in the suburbs and outlying sections reports indicate a big volume of construction of this character. A general improvement has been noted during the month, however, in the magnitude of construction of this character, and more and more people are becoming convinced that the time to build is now.

## Many New Dwellings Under Way at Springfield.

Springfield, Mo., March 23—[Special.]—According to the statement of the manager of a prominent lumber company of this city, there are more new dwellings under construction in Springfield now than at any time during the past five years. The sale of lumber over that of the past year has increased about 50 per cent and there is a greater demand at the present time for lumber and other building material than for several years. The sale of brick has not increased to the same extent, but a greater demand is expected. The price of lumber has decreased 50 per cent and the price of brick approximately 10 per cent. Cement has decreased somewhat in price, but when compared to the decline in the prices of other building materials, it is still comparatively higher.

There are about 50 residences now being erected in this city, besides additions being built to many homes, and the erection of garages and other outbuildings.

## Big Increase in Okmulgee Building Permits.

Okmulgee, Okla., March 23—[Special.]—According to F. C. Dumont, Building Inspector, February building permits for Okmulgee amounted to \$219,850, as compared with \$68,000 for January. There are now under construction 10 business blocks and several dozen new dwellings in various parts of the city.

## Industries Resume at Birmingham—Encouraging Report From Building and Loan Associations.

According to recent announcements from Birmingham, three sanitary pipe manufacturers have resumed operations, while two plants in Anniston and another in Bessemer have again begun manufacturing. In addition, the reports of Birmingham building and loan associations indicate that more residences are now being erected there than for a long time past, and the number of persons who have adopted the monthly payment plan has materially increased.

Referring to the operations of a large building and loan association in Birmingham, the Birmingham Age-Herald says:

"This association is putting out \$100,000 to \$200,000 per month in the financing of homes. We are also financing numbers of storehouse enterprises, but 95 per cent of our business is around the building of residences, homes for the citizens of Birmingham.

"The average home which we are financing is one costing \$2000, \$3000, \$4000 and \$5000. The prevailing loan is for residences of moderate cost.

"Twenty-five to 30 residences per month are being built under financial arrangements made with this company and financed by it. The number of persons taking out the monthly payment investment stock is twice that of the past two and a half years.

"The general pace of our business is the greatest in our history. The investment being made by citizens in all departments is averaging a new record. It is not a case of building in prospect. Building is being done on a large scale and the trend to build is most pronounced. We increased our capital from \$6,000,000 to \$9,000,000 none too soon. The increase is being rapidly absorbed."

## Marked Improvement at Fort Worth.

Fort Worth, Tex., March 24—[Special.]—A survey of general business conditions by the Fort Worth Real Estate Board shows that there is a marked increase in the business of the lumber companies particularly and that there is a general belief on the part of the public that building material prices have probably reached their low level. John E. Quarles of the John E. Quarles Lumber Co. says:

"Lumber has been reduced in price in some instances over 50 per cent. The business we are doing at the present time indicates that the public is rapidly reaching the conclusion that now is the logical time to start the erection of new homes. While it is impossible for anyone to say that prices will not be lower, at the same time, we believe that if there will be any reduction it will be so slight that it would not be enough to deter any building operation from starting at the present time. It is my honest opinion that building will increase very rapidly and that prices on a number of commodities will probably advance instead of being lowered."

Other companies express a similar belief, and in general there is a considerably increased demand for building materials with bright prospects for an extensive building campaign during the spring.

## \$200,000 in New Building at Temple.

Temple, Tex., March 24—[Special.]—Within the past 90 days building operations aggregating over \$200,000 have been started in this city. Of this amount \$150,000 is in the early stages, while \$30,000 worth is under contract, though not yet started. Minor repairs for the same period total about \$7,000. Contractors report greater activity at present than for a long time past and more estimates now than they have had in the past three years all put together.

## Building Operations Rapidly Resumed at Spartanburg.

Spartanburg, S. C., March 24—[Special.]—Building permits issued in this city during March aggregated \$300,000. Two large contracts amounting to about \$250,000 have been awarded, one for the new high-school building and the other for the new Salvation Army structure. Building operations are being rapidly resumed and all inactivity in this line has apparently come to an end during the month of March.



## GOOD ROADS AND STREETS

### Nearly \$1,000,000 Expenditure Approved for Roads in Four Texas Counties.

Extensive plans for highway construction in four Texas counties have been approved by the United States Bureau of Public Works, Washington, D. C., the improvements contemplated involving a total expenditure of \$810,726. Approximately 55 miles of roads will be improved.

The largest amount of work is to be undertaken in Hunt County, the plans providing for the construction of 11.1 miles of 16-foot bituminous road on State Highway No. 1. The cost is estimated at \$406,831.43. A. D. Duck is county engineer and O. P. McWhirter, county judge, both of Greenville, Tex.

The next largest project is for the building of 32 miles of the Bankhead Highway in Howard County, the cost of which is estimated at \$292,403.65. The road is to be 16 feet wide and surfaced with gravel. R. W. Baker is county engineer and J. T. Brooks, county judge, both of Big Springs, Tex.

The third project involves the construction of 7.3 miles of 16-foot gravel road on Highway No. 12, from 5 miles north of Del Rio to Devils River in Val Verde County, known as Federal Aid Project No. 212. About \$50,580 will be expended. G. M. Jowers is county engineer and R. T. Hunnicutt, county judge, both of Del Rio.

The remaining work will be undertaken in Bexar County. Approximately \$60,911 is to be expended in the construction of 5.1 miles of State Highway No. 27, this road to be wide and surfaced with bituminous macadam to a width of 16 feet. C. E. Hoff is county engineer and Augustus McCloskey, county judge, both of San Antonio.

### State Highway Construction in Virginia.

Bituminous macadam roads will be constructed in various sections of Virginia by the Virginia State Highway Commission, offices at Richmond, and a steel bridge will be built across the Mattaponi River between King William and King and Queen counties. Bids are invited until April 7. The projects are divided as follows:

No. 69—6.42 miles of grading on State Road No. 9, in Augusta county between Jennings Gap and West Augusta, on which alternate bids will be considered for grading and bituminous macadam surfacing.

No. 84—5.4 miles on State Road No. 14, in Campbell county between Opossum Creek and Rustburg.

No. 94—7.05 miles on State Road No. 11, in Wise county from St. Paul toward Coeburn.

No. 102—65 miles on Fisher's Hill in Shenandoah county between Strasburg and Toms Brook.

The steel bridge to be constructed across the Mattaponi River will be 468 feet long and is known as Project No. 72-B.

Plans and specifications are on file with the Virginia State Highway Commission at Richmond and with the resident engineers at their respective offices. G. P. Coleman is State Highway Commissioner, with offices at Richmond.

### Three Contracts Awarded for State Roads in Missouri.

Contracts totaling \$80,115.35 for the improvement of three State roads in Missouri, aggregating 24.71 miles, have been awarded by H. P. Moberly, division highway engineer, Springfield. These contracts are subject to the approval of the Missouri State Highway Department, offices at Jefferson City, at its meeting in April.

Two of the contracts for road work in Cedar County, 9.73 miles being in Filey Special Road District and 7.48 miles in Lynn Township. The former was awarded to Allhands & Davis of Rogers, Ark., at \$34,436 and the latter to J. T. Hembree and Frank Patrick of Mulberry, Kans., at \$18,544.15. Both roads are located between Eldorado Springs and Stockton.

The third contract provides for the improvement of 7.5 miles of highway between Mansfield and Mountain Grove in Wright County and was received by M. E. Gillioz of Monett, Mo.

### Concrete Bridge Construction in Georgia.

The construction of concrete bridges is being undertaken on an extensive scale in Richmond county, Georgia. On the Savannah road at Spirit Creek a long, narrow wooden bridge has been replaced by an attractive concrete structure and a narrow, dangerous curve in the road eliminated. The bridge proper is 160 feet long by 20 feet wide, and is the longest and largest structure of this type in the vicinity. Convict labor was employed, and the cost was slightly under \$12,000. Construction was under the general supervision of William Greenslade, tenth district engineer of the State Highway Department, and J. L. Fulghum, county road superintendent, was in direct charge; both are of Augusta. Frank H. Turner of Augusta is chairman of the Roads and Bridges Committee.

It is stated that a concrete bridge will be erected over Little Spirit Creek, near the structure just completed; another over Little McBean Creek, and a third over McBean Creek. The latter will be on the boundary line of Richmond and Burke counties, and the commissioners of the two counties are co-operating.

It is expected that all of this work will be completed during the present year. There will then be no wooden bridges between Augusta and the boundary line of Burke county. Some time ago a concrete bridge was built over Butler Creek, and several years ago Double Branches was spanned by concrete structures.

### Bids Invited for 13 Miles of Highway in Tennessee.

Plans and specifications are now on file with the Department of Highways, Nashville, Tenn., for 13.56 miles of State Highway No. 1, in White county, between Sparta and the Cumberland county line. Bids will be received until April 8. W. P. Moore of Nashville is chief engineer.

The work involves 99,578 cubic yards of common and rock excavation, 127,289 square yards of modified Telford base course, 127,389 square yards of bituminous macadam surface course, 2952 linear feet of culvert pipe to be furnished and laid, 22,275 pounds of deformed steel bars, etc.

### Notes on Good Roads Construction.

Proposals are invited by the city of Orangeburg, S. C., until March 31 on \$300,000 of 5½ per cent., semi-annual, 40-year street paving bonds.

An ordinance has been passed by the City Council of Texarkana, Tex., authorizing the issuance of \$300,000 of bonds for street improvements. The city contemplates improving all its streets, and this is the second heavy issue ordered for street paving within 12 months.

The Commissioners of Collin county, Texas, offices at McKinney, have applied to the State Highway Department, Austin, Tex., for \$60,395 of State aid to be expended in the construction of 25 miles of State Highway No. 6. F. W. Cawthon of McKinney is county engineer.

On or about May 1, Madison county, Alabama, will vote on a bond issue of \$300,000 for rebuilding roads. A portion of the issue, if authorized, will be matched with State and Federal aid, and expended on the construction of a State highway system through the county and the balance used on the building of main lateral pikes. C. H. Pulley is president of the Madison County Board of Revenue, Huntsville, Ala.

The city of Richmond, Va., will pave 125,000 square yards of street with Durax block, sheet asphalt, granite block, concrete, asphaltic concrete, Willite or bitulithic, for which a \$500,000 bond issue is available. Bids for the work will be opened about April 10. Thomas B. Murrick of Richmond, is the engineer in charge.

A contract has been awarded by the city of Atlanta, Ga., to Case & Cothran of Atlanta, for paving streets with concrete. The cost is estimated at \$125,000. H. L. Collier of Atlanta, is chief of construction.

## Contracts Let for Twenty Miles Virginia Highways.

Three contracts have been awarded by the Virginia State Highway Commission of Richmond, for the construction of 20.93 miles of highways, bituminous macadam being specified for 13.51 miles and concrete for 7.42 miles. The bids were opened on March 15, and the contracts let are as follows:

G. P. Clay of Richmond, 4.26 miles of bituminous macadam surfacing on State Road No. 14, in Pittsylvania county, between Blairs and White Oak Mountain. C. L. Scott of Lynchburg, is the resident engineer.

Pace Construction Co. of Roanoke, 9.25 miles of bituminous macadam surfacing, 16 feet wide on State Road No. 10, in Roanoke and Botetourt counties, between Roanoke and Blue Ridge Springs. R. D. Bryant of Roanoke, is the engineer.

Allport Construction Corp. of Richmond, 7.42 miles of concrete surfacing, 16 feet wide on State Road No. 10, in Nansemond and Norfolk counties, between Wilroys and Portsmouth. John R. Sneed of Suffolk, is the engineer.

## \$700,000 Road Contracts Awarded.

Two contracts, totaling \$519,000, for improving highways in Potter county, Texas, and another contract for hauling gravel, amounting to \$203,000, were awarded by the commissioners of that county at Amarillo. One contract for 16 miles of paving was let to the Willite Construction Co. of Houston at \$280,000, and the other was received by the Standard Construction Co. of Dallas at \$239,000. The gravel-hauling contract was awarded to McKnight & Haymer of Amarillo. It is understood that these are the largest highway contracts ever let in the Panhandle section.

## Camp County, Texas, to Construct Roads.

The construction of a system of improved roads, involving an expenditure of more than \$400,000, is planned by the Commissioners of Camp county, Pittsburgh, Tex.

The funds are provided for by two bond issues, one of \$400,000, bearing 5½ per cent interest, and another of \$35,000, bearing 5 per cent interest. Both issues have been approved by the Attorney-General's Department at Austin, Tex.

H. C. Wilder of Mount Pleasant, Tex., is county engineer.

## Election on \$1,000,000 Road Bonds.

The construction of an extensive system of improved highways is contemplated by Callahan county, Texas, and the commissioners at Baird have ordered an election for April 16 to vote on a \$1,000,000 bond issue for this purpose. Tentative plans provide for the building of good roads to all sections of the county, including the completion of the Bankhead Highway from the Callahan county line, east of Putnam, to the Taylor county line, one mile east of Elmdale.

## \$308,000 Road Contract Awarded.

A large contract amounting to \$308,000 has been awarded to Cook & Arrington of Crockett, Tex., and Harris & Powell of Tyler, Tex., joint bidders, for the construction of 46 miles of roads in Falls County, Texas. Guy W. Courter of Marlin is county engineer.

The work involves 43,633 cubic yards of gravel surfacing, 1705 cubic yards of concrete, 117,589 pounds of reinforcing steel, 9600 linear feet of bridge piling and 197,320 feet of bridge lumber.

## Acquires Hosiery Mill and Will Operate.

Hall's Hosiery Mills, W. F. Hall, proprietor, Statesville, N. C., has acquired the Liberty Hosiery Manufacturing Co., and will operate the plant, the daily output to be 250 dozen pairs of hose. The main mill building is two stories high, 50x100 feet, of brick construction, with an annex 25x60 feet. The structures are entirely completed and operations will begin with 60 knitting machines, operated by 30-horse-power electric belt drive. The buildings and site cost \$25,000, and the machinery \$25,000 additional. About 35 operatives will be employed. This mill was recently reported in these columns as being rebuilt by the Liberty Hosiery Manufacturing Co., and equipped with new machinery.

# TEXTILE

## Dallas Women Urge Cotton for Dresses to Utilize 13,000,000 Surplus Bales.

Dallas, Tex., March 28—[Special.]—Members of the Dallas Housewives' Chamber of Commerce have launched plans for the utilization of the 13,000,000 bales of cotton now stored in the South, urging the use of cotton goods for dress materials by every woman in America.

Mrs. William Bacon, vice-president of the Chamber, said: "Our cotton, to a large extent, represents the prosperity of the South. Through cotton, as our barometer of wealth, every one of us is directly affected. If the women of not only the South, but of America, will stand behind this move, we can take this vast amount of cotton not being utilized and clear the shelves of our Southern farmers."

It is planned to get the co-operation of the wife of President Harding, and then the leaders of the women's political parties in the country. Vaudeville houses, motion picture places, schools and colleges will be asked to aid in making the movement a success.

## Summary of Texas Cotton Mills.

A recently issued summary of the cotton mills in Texas shows that there are now a total of 17 mills in the State, with 3000 employees.

The oldest mills are at Dallas, where the Dallas Cotton Mills were established in 1888, with a capital of \$250,000. Today the assets, including the mill, are valued at approximately \$1,000,000. Two hundred and twenty-five people are employed.

At Waco the Miller Cotton Mills have the finest and most modern plant in Texas. The mills were capitalized originally at \$500,000, and this was increased in September, 1920, to \$1,000,000.

In addition to the two mills above mentioned, there are 15 other mills in Texas, as follows: Bonham Cotton Mills, Bonham; Denison Cotton Mills, Denison; Sherman Manufacturing Co., Sherman; Texas Cotton Mill Co., McKinney; Corsicana Cotton Mills, Corsicana; Waxahachie Cotton Mills, Waxahachie; Hillsboro Cotton Mills, Hillsboro; Brazos Valley Cotton Mills, West; Itasca Cotton Manufacturing Co., Itasca; Guadalupe Valley Cotton Mills, Cuero; Postex Cotton Mills, Post City; South Texas Cotton Mills, Brenham; Gonzales Cotton Mills Co., Gonzales; Belton Yarn Mills, Belton; San Antonio Cotton Mills, San Antonio.

## Textile Mill Notes.

The Chadwick-Hoskins Company of Charlotte, N. C., manufacturer of white sheeting, has increased capital stock from \$3,000,000 to \$5,800,000.

An increase of capital from \$150,000 to \$300,000 has been announced for the Whitnel Cotton Mill Co. of Lenoir, N. C., manufacturer of cotton yarn.

The capital stock of the Hudson Cotton Manufacturing Co. of Lenoir, N. C., has been increased from \$125,000 to \$300,000. The company manufactures cotton yarn.

The Broad River Mills of Blacksburg, S. C., have just issued a 100 per cent stock dividend to its stockholders. This dividend is in addition to a 25 per cent cash dividend paid on February 1.

The park for the Abbeville Cotton Mills of Abbeville, S. C., as referred to last week, is to be developed under plans prepared by E. S. Draper, landscape architect, Charlotte, N. C. Included in the new buildings will be a community-house, the plans prepared by W. L. Hemphill.

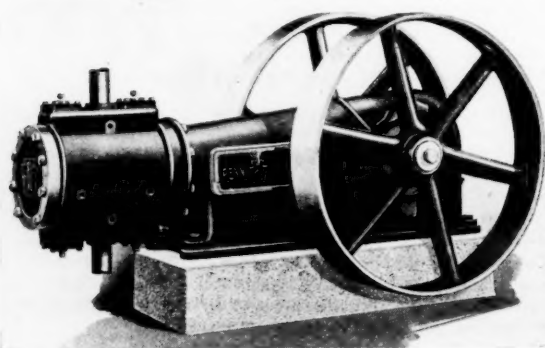
The Knoxville Spinning Co. of Knoxville, Tenn., by S. W. Duggan, treasurer, advises that their recent increase of capital from \$150,000 to \$300,000 was made to partially take care of a 10,000-spindle mill equipped during the spring and early summer of 1920, and in operation since last July, on 26-1, 28-1 and 30-1 slow-carded yarn.

# MECHANICAL

## Air Compressors and Vacuum Pumps.

Air compressors and vacuum pumps including novel features are comprised in the line of products here represented by two specimen illustrations.

In a general way, their construction follows the accepted practice of enclosed dirt and dust-proof mechanism, with splash lubrication for the driving parts. It has been usual to keep the oil from a splash lubrication system out of the air cylinder, to provide a partition in the main frame, carrying an extra stuffing-box, but as the bored guide type of crosshead is used in this compressor, more completely filling the guide portion of the compressor frames and supplemented by a baffle plate placed ahead of the crosshead, it has

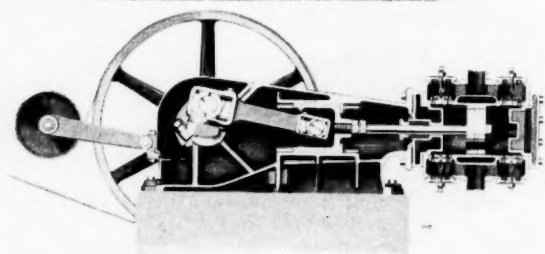


PUMP OR COMPRESSOR READY FOR USE.

been possible to eliminate this partition and stuffing-box. Quite a novel feature in connection with the system is an oil-float gauge, indicating at all times the oil level in the basin.

There is a forged crankshaft, operating in removable bronze main bearings, which makes for quick adjustment and replacement. This shaft permits a solid box at each end of the connecting rod, the eye of the connecting rod being slipped over the crankshaft and the adjusting gibs and wedges being then inserted.

It will also be noted that the flywheels are mounted onto the tapered ends of the crankshaft and keyed and held in place by a washer and cap bolt. This eliminates the split hub flywheel construction, which had to be wedged for mounting or dismounting. It is claimed that with the taper construction flywheels running



SECTIONAL VIEW OF PUMP OR COMPRESSOR.

out of true are unknown. The ring plate type of valve, which is guided on the outside instead of inside the valve, is used, making it impossible, it is stated, for the valve to cock in operation.

Both air compressors and vacuum pumps are of the same general construction, excepting that the air cylinder of the vacuum pump is of considerably greater diameter for the same stroke size and the positions of the valves are reversed. That is, where the

discharge valves are at the top in the air compressor, they are placed at the bottom in the vacuum pump.

These machines are built both power and steam driven. The steam-driven type has a balanced piston valve steam end. They are manufactured by the Pennsylvania Pump & Compressor Co. of Easton, Pa., which began manufacturing last July, and which reports extensive sales of its products.

## Commendations, Kicks and Comments

### Second the Motion.

JOHN K. PENDER, Pender Hardware Co., Tarboro, N. C.—Your paper is worth its weight in gold. I wish every Southern man might have it in his home.

### Worth Many Times the Price.

JOHN F. POWELL, General Contractor, Monroe, La.—Enclosed please find check for subscription to your valuable paper. I could not afford to do without it for many times the price.

### Helpful in Keeping Track of New Things.

ALLEY H. MOWRY, Richmond, Va.—You keep such close touch with the Southern territory that I have, for a long time, found your magazine quite helpful in keeping track of new things that are going on. In addition to this, I find some interesting articles and information of other kinds.

### Covers the Field Thoroughly—Views of Conditions Correct.

C. J. MOYLAN, West Helena, Ark.—Please credit my subscription with enclosed money order and continue to send as heretofore. Like others, I would hate to miss a single issue of the MANUFACTURERS RECORD. To my mind, your journal covers the entire field thoroughly, and I am of the opinion that the near future will show that your views of general conditions were correct.

Wishing you continued prosperity, etc.

### An Appreciative Subscriber in Egypt.

NICOLAS ST. TRIPHON, Alexandria, Egypt.—I am in receipt of your favor announcing the expiration of my subscription. I beg to hand you enclosed \$12 in American currency notes (as Postoffice does not accept remittance by Postal Money Order for America), which is to cover the amount of the above-stated bill.

I highly appreciate the services which your paper renders to the international trade, acquainting the overseas reader with the views of first-rate writers and giving solutions on any financial and social problem arising from the actual conditions of life.

### A Suggestion on Chinese Relief.

F. Y. PONDER, Henrietta, Tex.—Please enter the subscription of V. M. Burkett, Route B, Henrietta, Tex., for MANUFACTURERS RECORD, six months, and mail bill to me. I loaned Mr. Burkett several copies of the RECORD, and he at once became an enthusiastic disciple. It has put him to thinking in the right direction. He said he wanted to write you a word of encouragement, but did not have the time. He is preparing an article that I think he will submit to you.

A man told me he saw cotton sell for \$13.60 a bale yesterday. Someone has blundered awfully somewhere.

I wish you would start a campaign for Chinese relief. Here is the proposition: If 20,000,000 Chinese die we lose just that many customers for the present, with the loss of their offspring for all time to come. Why can't individuals make credit the same as nations? Commodities will be the basis of the credit in this case, rice and wheat, and later cotton cloth and cotton. We will say they cannot buy. If we gave away half of our wheat the half left would sell for more than all of it will sell for under present conditions. All right, sell it to the Chinese on any sort of time they ask for, take their notes, form a syndicate over there to make individual notes, and pool them into a few larger loans or credit units. Use this paper in the purchase of any commodity they might have to offer in other districts. Raise the dickens with their Government for allowing their land to be confiscated for taxes.

Politics is enough to disgust anybody with all kinds of Government. On that account the public at large has lost confidence in, and in a large measure, respect for Government, but they have not lost confidence in business integrity. Business must be run on a basis of square deal or it stops because it is between individuals, and the relation depends on mutual personal satisfaction.



# Construction Department

## EXPLANATORY.

The MANUFACTURERS RECORD seeks to verify and obtain additional information regarding all enterprises reported in its Construction Department, by direct daily correspondence. Further facts of news value are published later from telegraph, mail and representatives' reports. We appreciate having our attention called to errors that may occur.

## DAILY BULLETIN.

The Daily Bulletin of the MANUFACTURERS RECORD is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$20.00 per year.

## Bridges, Culverts and Viaducts.

Ala., Russellville.—Franklin County let contract for repairing Nix Bridge on Big Bear Creek; R. S. Mapes, Commr. 1st Dist.

Ala., Mobile.—Mobile County will construct pile and framed timber fender piers at drawbridge over Dog River; bids until April 11; John D. Hagan, Prest. Board of Revenue and Road Commrs. (See Machinery Wanted—Bridge Construction.)

Fla., Bronson.—Levy County will construct reinforced concrete culverts and bridges in District No. 1; will sell \$100,000 bonds; R. T. King, Trustee; D. Frazier Thomas, Engr., Cedar Keys, Fla.

Fla., Maxville.—Duval County will build 20-ft. span wooden bridge on New River road; construction by convict labor; Isham Randolph & Co., Engrs., Barnett Bldg., Jacksonville, Fla. Lately noted. (See Machinery Wanted—Lumber.)

Miss., Oxford.—Lafayette County will build bridge across canal on Clear Creek in Beat 4; also 12 bridges in Beat 3 Road Dist.; bids until Apr. 5; W. M. Woodward, Clk. County Supvrs. (See Machinery Wanted—Bridge Construction.)

Mo., Jefferson City.—State Highway Dept. will build 8 bridges, including Cravatt, Perlinger and other bridges; \$34,165.95; Chester D. Mann, Bridge Engr.

Mo., Forsyth.—State Highway Dept., Jefferson City, Mo., let contract to M. E. Gillioz, Monett, Mo., at \$45,757.85 for bridge over White River; three 150-ft. spans, two 20-ft. I beam approach spans, 2 concrete piers, etc.; Chester D. Mann, Bridge Engr., Jefferson City, Mo. (Previously noted inviting bids.)

Tenn., Ashland.—Cheatham County plans to construct 2 reinforced concrete deck girder bridges and earthwork approaches over Turnbull and Muddy Creeks; \$50,000. Address O. H. Hampsch, 1219 Stainbach Ave., Nashville, Tenn.

Tenn., Knoxville.—May reflow Tennessee River Bridge; creosote wooden blocks; \$20,000; J. Boyd McCalla, City Commr.

Tex., Hillsboro.—Hill County will build bridge; low bidder, Austin Bros., Dallas, Tex., at \$9,065.50; W. L. Wray, County Judge; Bryant & Huffman, County Engrs., Austin, Tex.

Tex., Nacogdoches.—Nacogdoches County will construct concrete and steel bridges on 19.6 mi. Garrison Rd., State Highway No. 21; bids until Mch. 29; J. M. Marshall, County Judge; Lamar Acker, County Engr. (See Machinery Wanted—Bridge Construction.)

Va., King William.—Virginia State Highway Commn., 116 S. 3d St., Richmond, Va., will build steel bridge 468 ft. long over Mattaponi River between King William and King and Queen counties on State Rd. No. 13; Virginia Project No. 72-B; bids until Apr. 7; G. P.

Coleman, State Highway Commr., Richmond. (See Machinery Wanted—Bridge Construction.)

Va., Roanoke.—Virginia State Highway Commn., Richmond, Va., let contract to Marshall Bros., Roanoke, Va., for 2 reinforced concrete and 2 steel I beam bridges; R. D. Bryant, Engr., Roanoke. (Lately noted inviting bids.)

W. Va., Huntington.—May build highway bridge across Ohio River; C. W. Campbell, Mayor.

## Canning and Packing Plants.

Ky., Stanley.—Gaw & Field Canning Co. will increase plant capacity; contemplates season's output, 15,000 to 20,000 qts. tomatoes.

N. C., Scotland Neck.—Norfolk S. Smith, Editor of Commonwealth, interested in establishing plant for commercial canning. (See Machinery Wanted—Canning Plant.)

Tex., El Paso.—Border Packing Co., capital \$20,000, inceptd. by Mack H. Camp, C. C. Gibson, A. W. Graham.

## Clayworking Plants.

Ala., Gadsden.—Bricks.—Gordon Hall purchased brick plant; will repair and improve; install additional machinery and electric motor; contemplates daily output 25,000 to 40,000 bricks.

Ky., Corbin.—Bricks.—Corbin Brick Co. increases capital from \$30,000 to \$50,000.

Okla., Chelsea.—Bricks.—Chelsea Brick Co., capital \$50,000, inceptd. by Leon C. Merritt, J. A. Morrison, both Chelsea; W. L. Buckles, Okmulgee, Okla.

W. Va., Charleston.—Bricks.—Standard Brick Co., Fred M. Staunton, Prest., increased capital from \$10,000 to \$150,000.

W. Va., Charleston.—Clay Products.—American Clay Products Co., C. L. Price, Prest., increases capital from \$5000 to \$50,000.

## Coal Mines and Coke Ovens.

Ala., Manchester.—Manchester Coal Co. organized by Dr. Blanton, Saragossa, Ala.; John Kilgore, Jasper, Ala.; will develop coal land; install steam shovel, purchased; erect miners' houses; build 2½ mi. railroad track.

Ky., Hazard.—Hazard Star Coal Co. leased coal lands; will develop; erect tippie, build miners' houses, school, church, etc.

Ky., Sergeant.—Blue Diamond Coal Co. acquired 5000 acres coal land; will develop.

Miss., Meridian.—Carleton-Hawkins Coal & Fuel Co., capital \$50,000, inceptd. by C. S. Carleton, E. B. Hawkins, R. A. Emmons.

Tex., Belton.—Huddleston Mining Co., capital \$200,000, inceptd. by H. F. Hannold, R. R. Huddleston, J. E. Palm.

Va., Grundy.—New Era Coal Corp., capital \$100,000, inceptd. with C. B. Hancock, Prest., Bluefield, W. Va.; H. Claude Pobst, Secy.; F. E. Clark; both Grundy, Va.

Va., Richmond.—Loan Coal Co., E. T. Long, Prest., increased capital from \$100,000 to \$200,000.

W. Va., Bluefield.—Wysong-McCoy Coal & Land Co., capital \$650,000, inceptd. with J. K. McCoy, Mullens, W. Va.; A. F. Wysong and A. J. McCoy, both Princeton, W. Va.

W. Va., Charleston.—Georges Creek Coal Corp., Box 1341, organized with L. Harris, Prest., Bay City, Mich.; J. M. Harris, Secy.; Treas.; C. S. Munro, Auditor, both Charleston; increased capital to \$500,000; has leased 743 acres coal land; present daily output 150 tons; install tipples, cutting machines and haulage motors. (See Machinery Wanted—Mining Machinery; Electrical Equipment.)

W. Va., Clay County.—Kanawha Standard Coal Co., Clarksburg, W. Va., inceptd. with \$100,000 capital.

W. Va., Gilbert.—Guyan Collieries Corp., E. C. Gilbert, Mgr., Gilbert, W. Va., will develop 8000 acres coal land; has mchry.

W. Va., Huntington.—Coal River Collieries Co., capital \$1,000,000, inceptd. by Harry Leaberry, Henry L. Porter, both Huntington; J. T. Keister, Peru, Ind.

W. Va., Huntington.—Parsons Coal Co., A. P. Parsons, Prest.-Mgr., 418½ 10th St., will install pumping equipment, hoisting apparatus, cars, etc.; invites bids.

W. Va., Monongalia County.—Delmar Coal Co., Fairmont, W. Va., plans mine improvements, installing conveyor system, etc.

## Concrete and Cement Plants.

Fla., Miami.—Monolithic Concrete Tile.—Dexter-Geare Corp. has purchased site to establish plant for mfr. of monolithic concrete wall tile, roofing tile and bricks; also erect machine shop for marine and stationary work.

Tex., Dallas.—Concrete Pipe.—Texas-McCracken Concrete Pipe Co., capital \$50,000, inceptd. by C. R. Nichols, Ben. Fell, H. E. Johnson.

W. Va., New Martinsville.—Concrete Products.—Universal Concrete Products Co., have under construction 70x120-ft. building for mfr. of concrete pipe, bricks, blocks, etc.; bids open for mchry.; Hector Eschenbrenner, Engr.

## Drainage Systems.

Ky., Paducah.—Crawford Lake Drainage Dist., Commrs. of McCracken and Ballard Counties will drain and reclaim about 2000 acres land; costing \$25,000.

N. C., Kenansville.—Duplin County Drainage District No. 2 (Stewart's Creek) organized to construct 20 miles canals and ditches in Duplin and Sampson counties, reclaiming 5000 acres; Major Wentworth W. Pierce, Drainage Engr., Goldsboro, N. C.

Tex., Greenville.—Hunt County Drainage Dist. No. 1 organized to reclaim about 2000 acres land; issued \$100,000 bonds; Major Arthur A. Stiles, State Reclamation Engr., Austin, Tex.

Tex., McKinney.—Collin County Drainage

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Dist. No. 3 organized to reclaim about 6000 acres land; contemplate \$300,000 bond issue; Major Arthur A. Stiles, State Reclamation Engr., Austin, Tex.

### Electric Plants.

Md., Williamsport.—W. D. Bryon Co., care Walter Bryon, will erect 1-story 50x40x30-ft. high boiler-house addition to electric-power plant; Quigley Hafer, Archt., 155 Garfield St., Chambersburg, Pa.; day labor.

N. C., Randleman.—Will issue \$10,000 bonds to purchase Randolph Power Co.'s plant. Address The Mayor.

Okla., Boynton.—Let contract to Oklahoma Gas & Electric Co. to install street arc-lamps.

Tex., Dallas.—Dallas Power & Light Co. plans extending lighting system on S. Ervay St., from Commerce St. to City Park; cost \$35,000.

Tex., Hallettsville.—Will improve electric-light plant; install 120 H. P. steam engine, horizontal return-tubular boiler, 150 H. P. open-type feed-water heater, etc.; bids until Apr. 14; alternate bids on 200 H. P. steam engine; S. M. Kuykendall, City Secy. (See Machinery Wanted—Electric Plant Equipment.)

Va., Quantico.—Navy Dept., Bureau Yards and Docks, Washington, D. C., plans to install electric-light and power system.

W. Va., Charleston.—Moyer-Shewey-Thurston Electric Co., 303 State Street Bank Bldg., capital \$100,000, organized with H. D. Moyer, Prest.; J. G. Shewey, V.-P.; J. A. Thurston, Treas. and Gen. Mgr.

W. Va., Man.—Man Mining Co. will apply for franchise to construct electric-light system.

### Flour, Feed and Meal Mills.

N. C., Laurinburg.—Hammond Co. increases capital from \$150,000 to \$500,000.

### Foundry and Machine Plants.

Ala., Gadsden.—Plumbing, Fittings, etc.—Stringer Bros., A. E. Stringer have purchased site and buildings, also erect additional buildings and equip for foundry, daily capacity for melting 30 tons iron and 2 tons brass; mfrs. special brass and iron plumbing fittings.

D. C., Anacostia, Washington P. O.—Shop.—Navy Dept., Bureau Yards and Docks, Washington, D. C., will erect 1-story 60x100-ft. shop; steel frame construction; Spec. 4389; has plans.

Ky., Louisville.—Weighing Machines.—Weighing Machine Mfg. Co. increased capital from \$50,000 to \$75,000.

Ky., Owensboro.—Machinery.—Smith Machine & Supply Co., capital \$10,000, inceptd. by Charles T. Smith, J. D. Church, Frank T. Faith.

Ky., Paducah.—Harrows.—Milburn Implement Mfg. Co. moved plant from Milburn; plans expansions in all departments; will mfr. harrows.

Md., Baltimore.—Machine Shop.—Morton McI. Dukehart Co. let contract to John C. Mach. 2903 Callaway Ave., at \$10,000 to construct 1-story 40x82-ft. machine shop of concrete construction; W. H. Emory, Archt., Munsey Bldg. (Lately noted to erect.)

Md., Baltimore.—Steel.—Southern Steel Construction Co., 19 E. Lombard St., capital \$100,000, inceptd. by Wm. S. Briddell, Thurley W. Spydell, Walter C. Mylander.

Miss., Meridian.—Tie-plate Rail Anchor.—Moseley Tie-plate Rail Anchor Co., capital \$10,000, inceptd. by J. C. Moseley, J. T. Bailey, R. A. Young.

Miss., Rienzi.—Implements.—Vanstory Mowing Machine & Cutters Co., capital \$1,000,000, inceptd. by W. J. VanStory, R. D. Perry, E. W. Burnett.

Mo., Poplar Bluff.—Cars.—Missouri Car Co., capital \$500,000, contemplates establishing plant for mfr. of one-man street cars; Chamber of Commerce interested.

Mo., St. Louis.—Fans.—Belco Ventilating & Mfg. Co., 2911 Olive St., organized with James Belter, Prest.; Arthur Berger, Secy.-Treas.; mfrs. exhaust fans. (Lately noted inceptd., capital \$100,000.)

Mo., St. Louis.—Foundry.—Chester Iron & Foundry Co., 7800 Vulcan Ave., let contract to John Dougherty, 8026 Riley St., at \$30,000 to construct 1-story 50x100-ft. foundry.

N. C., Charlotte.—Machinery.—Alexander & Garsed let contract to T. C. Thompson, at \$50,000 to erect 2-story 99x39-ft. brick building.

W. Va., Montgomery.—Machinery.—Montgomery Machine Works, capital \$10,000, inceptd. by J. A. Wendell, H. Lane, both Montgomery; O. B. Lowery, Charleston, W. Va.

### Gas and Oil Enterprises.

Ky., Louisville.—Active Oil Co., capital \$10,000, inceptd. by Walter S. Adams, J. T. Finck, Joe T. Mounsey.

Ky., Louisville.—Oil Fork Development Co. increases capital from \$80,000 to \$250,000.

La., Shreveport.—Refining.—Great Southern Producing & Refining Co., Indianapolis, Ind., plans erection additional unit; J. E. A. Moore, Engr., 1900 Euclid Ave., Cleveland, O.

Md., Baltimore.—Crown Oil & Wax Co., Sth and Pratt Sts., reported to expend \$25,000 on improvements; erect storage tanks to double capacity.

Md., Baltimore.—Arundel Oil Corp., capital \$400,000, inceptd. by Geo. M. Kimberly, Md. Trust Bldg.; Bruner R. Anderson, Law Bldg.; John A. Vogt.

N. C., Goldsboro.—North State Oil Co., capital \$50,000, inceptd. by Geo. D. Sasser, J. G. Spence and John B. Howell.

Okla., Ardmore.—Roal Oil Co., capital \$100,000, inceptd. by Robt. H. Griffin, Healdton, Okla.; Alfred Hague, Red Rock, Okla.; A. A. Murrell, Billings, Okla.

Okla., Cushing.—Jones Oil & Gas Co. increased capital from \$45,000 to \$60,000.

Okla., Grandfield.—Hamilton Oil Co. of Oklahoma, capital \$300,000, inceptd. by D. A. and Alex. Hamilton, Mose R. Wright.

Okla., Oklahoma City.—Anderson Drilling Co., capital \$50,000, inceptd. by D. Anderson, D. W. Hudson, Harry G. Johnson.

S. C., Charleston.—Economy Oil Co., Edward Chisolm, Secy., plans increasing capital from \$10,000 to \$50,000.

S. C., Columbia.—Columbia Petroleum Co., W. J. Keenan, Jr., Prest., increased capital from \$25,000 to \$35,000. (Lately noted contemplated.)

Tex., Breckenridge.—Consumers' Water & Gas Co., capital \$500,000, inceptd. by E. G. Dawes, R. W. Heasley and O. L. Barr; plans laying 35 mi. water and gas lines through Breckenridge fields to South Bend field in Young County; contemplates erection absorption gasoline plant.

Tex., Burkburnett.—Meridian Petroleum Corp. of Texas, capital \$300,000, inceptd. by H. J. Exley, R. B. McCaul, J. E. Dunn.

Tex., Fort Stockton.—Grant Oil Corp. plans installing pumping plant.

Tex., San Antonio.—Castus Oil Co., increases capital from \$30,000 to \$100,000.

Va., Richmond.—Dickinson Gas Co., capital \$500 inceptd. with W. S. Bronson, Prest.

### Ice and Cold-Storage Plants.

S. C., Aiken.—Community Ice & Coal Co., capital \$25,000, inceptd. with D. W. Gaston, Prest.; John A. May, V.-P.; B. T. Dyches, Secy.-Treas.; will erect 15-ton combination plant; has site.

Tex., San Antonio.—Southern Ice & Cold Storage Co. will erect \$25,000 plant addition of brick construction.

### Land Developments.

Fla., Miami Beach.—Beach Construction Co., capital \$250,000, inceptd. with Carl G. Fisher, Prest.; R. B. Montgomery, Secy.

S. C., Abbeville.—Abbeville Cotton Mill will develop park; contemplates constructing spiral walks, tennis court, basket-ball court, playground, bandstand, rustic bridge and rose arbors, pergolas, summer-house, etc.; E. S. Draper, Landscape Archt., 11 E. 5th St., Charlotte, N. C.; W. L. Hemphill, Archt. for community-house. (Mr. Hemphill was recently incorrectly reported as preparing plans for park.)

Tex., San Antonio.—Kenneth Wilmer and H. S. Dickinson will expend \$75,000 to develop and improve 46-acre tract to be known as Woodlawn Place; will subdivide into 250 lots for residences, with sewer and gas mains, electric lights, telephone lines, cement walks, curbs and paved streets; will develop Woodlawn Park through center of tract.

Va., Winchester.—Virginia Valley Orchard Co., capital \$200,000, inceptd. with Boyd R. Richards, Prest.; W. W. Glass, Secy.

W. Va., Huntington.—Campbell Park Land Co., Hippodrome Bldg., capital \$65,000 organized with Hans Watts, Prest.; W. L. Reece, Secy.-Treas.; will develop 150 acres into town lots and villa sites.

W. Va., Martinsburg.—Potomac Fruit & Supply Co., capital \$10,000, organized with M. W. Fulton, Prest., Cherry Run, W. Va.; W. B. Connell, Secy.-Treas.-Mgr., Martinsburg. (See Machinery Wanted—Orchard Equipment, etc.)

### Lumber Manufacturing.

Ky., Hazard.—Hazard Lumber & Supply Co., S. M. Wolfe, Prest., erect 60x300-ft. building; construction by owners; install woodworking mch. for planning mill. (Lately noted increased capital to \$100,000.)

Ky., Whitesburg.—Hazard Lumber & Supply Co., S. M. Wolfe, Prest., Hazard Ky., will erect 60x100-ft. building; construction by owner; install woodworking mch. for planning mill.

Okla., Pawhuska.—Echo Planing Mill, capital \$30,000, inceptd. by Henry L. Smith, Tolbert Jones, Oran West.

S. C., Columbia.—Southern Lumber Co., capital \$10,000, organized with W. M. Woods, Prest.; J. M. Clark, Secy.-Treas. (Lately noted inceptd.)

### Metal-Working Plants.

Fla., Tampa.—Bed Springs.—Florida Mattress Factory, Box 293, contemplate the mfr. of National springs; data and prices on materials. (See Machinery Wanted—Bed-spring Materials.)

Ky., Louisville.—Wheel Rims, etc.—Collapsible Wheel Co. may acquire property of Kentucky Iron & Steel Co.; expend \$100,000 for additions, new machinery, new equipment, etc.

N. C., Charlotte.—Stop-motion Machine-Hunt's Automatic Stop Motion Co., capital \$125,000, inceptd. by R. L. Saunders, Charlotte, and H. H. Hunt, Kannapolis, N. C.; contemplates erecting plant for mfr. of automatic stop-motion machine for textile mch.

Tenn., Nashville—Enameling.—Nashville Enameling Co., 42nd and Charlotte Pike, organized with Val Taylor, Prest., will erect concrete, mill construction bldg.; has mch.; will probably need additional equipment about July 1st. (Lately noted inceptd., capital \$50,000.)

Tex., Bryan—Automatic Shoe Polisher.—Texas Automatic Shoe Polishing Co. will erect plant for mfr. of automatic shoe-polishing machine. (Lately noted inceptd., capital \$75,000.)

W. Va., Huntington—Container.—Scranton Container Corp., capital \$50,000, inceptd. with W. F. Scranton, Prest.-Gen. Mgr.; O. M. Brown, Secy.-Treas.; will mfr. odorless containers and patented waste-paper baskets.

### Mining.

Ark., Hatton—Manganese.—Cora Mining Co. will develop manganese land.

Ky., Madisonville—Crushed Stone.—Sunlight Crushed Stone Co. (lately noted inceptd., capital \$100,000) organized with W. J. Sparks, Prest.-Mgr., Mt. Vernon, Ky.; J. Basil Ramsey, Treas., Madisonville; have 500 acres under development with daily capacity of 750 tons limestone; install complete rock-crushing outfit. (See Machinery Wanted—Rock-crushing Machinery.)

Md., Baltimore—Quarries.—Avondale Quarries Corp., 42 Gunther Bldg., capital \$200,000, inceptd. by Walter Sporman, J. Blaine Diven, Adolph Meyer.

Okla., Enid—Sand and Gravel.—Tishomingo Sand & Gravel Co., capital \$20,000, inceptd. by L. A. Snyder, C. I. Brown, P. E. Slater.

Okla., Muskogee—Gravel.—Eldon Gravel Co., capital \$25,000, inceptd. by H. B. Nelson, G. M. Swanson, Irwin Donovan.

S. C., Bennettsville—Gravel.—Madeline Gravel Co., capital \$5,000, inceptd. with J. J. Heckhart, Prest.; George W. Dudley, Secy.; B. M. Edwards, Treas.

Tex., Dallas—Gravel.—Dalter Gravel Co., capital \$50,000, inceptd. by G. S. Webber, W. G. Jenkins, Pat. C. Miller.

### Miscellaneous Construction.

Ala., Mobile—Tanks.—United States Shipping Board, Emergency Fleet Corp., Hibernian Bank Bldg., New Orleans, La., will erect two 55,000-bbl. capacity fuel-oil tanks on Blakely Island; bids until Mch. 30; Const. Engr., U. S. Shipping Board, Room 507, 45 Broadway, New York. (See Machinery Wanted—Tanks.)

Fla., Miami—Wharf.—Contemplates constructing wharf additions. Address City Engineer.

Fla., Plant City—Swimming Pool.—City Park & Recreation Assn., H. L. Askew, Secy., contemplates construction 40x120-ft. swimming pool with pavilion and bathhouses in Gilchrist Park; W. E. Lee, Mayor.

Ga., Brunswick—Docks.—Contemplate constructing docks. Address Board of Trade.

Mo., Springfield—Dam.—Fin and Feather Club Chas. E. Gardner, Prest., 947 Weller Ave. will construct 1500-ft. dam of earthen and concrete construction to create 40-acre lake; also erect clubhouse.

N. C., Charlotte—Swimming Pool.—Will construct concrete swimming pool costing \$15,000; Hugh Merrill, Jr., Supt. of Parks.

N. C., Charlotte—Swimming Pool.—Will construct 125x75-ft. swimming pool in Independence Park; concrete construction costing \$15,000. Address Park Comsn.

S. C., Charleston—Terminals.—Will issue \$1,000,000 bond for development of port and terminal utilities. Address Mayor Grace.

Tex., Corpus Christi—Breakwater.—Will vote Apr. 15 on \$100,000 bonds to complete construction of breakwater. Address The Mayor.

Tex., Port Lavaca—Sea Wall.—Let contract to A. S. Adams, Houston, Tex., at \$109,505.75 to construct sea-wall and street improvements; D. E. Guldry, Mayor. (Lately noted.)

Tex., San Antonio—Memorial Monument.—Old Trail Drivers' Assn. plan to erect memorial monument in Brackenridge Park; Adams & Adams, Archts.

Va., Hampton Roads—Pier.—Navy Dept., Bureau of Yards and Docks, Washington, D. C.; will construct speed-boat pier; has plans.

### Miscellaneous Enterprises.

Ala., Akron—Potato Curing.—Contemplates establishing 5,000-bu. capacity sweet-potato curing plant and storage house; E. R. Jameison, County Agent, Greenboro, Ala.

Ala., Moundville—Potato Curing.—Contemplates establishing 5,000 sweet-potato curing plant and storage house; E. R. Jameison, County Agent, Greenboro, Ala.

D. C., Washington—Dry Cleaning.—Hoffman Co., 720 12th St. N. W., will erect 33x50-ft. dry-cleaning plant of concrete and steel construction; Vogt & Didden, Archts., Home Life Bldg.

Fla., Avon Park—Hardware.—W. R. England Hardware Co., capital \$23,000, inceptd. with W. R. England, Prest.; F. C. McRae, V.-P.; R. H. Stodden, Secy.; A. V. Anderson, Treas.

Fla., Fort Lauderdale—Building.—Lauderdale Building Co., capital \$50,000, inceptd. with C. J. Joiner, Prest.; C. E. Rickard, V.-P.; C. P. Weilding, Secy.-Treas.

Fla., Jacksonville—Engraving.—Wrigley Engraving & Electrotype Co., capital \$25,000, inceptd. with J. A. Wrigley, Prest.; E. J. Wrigley, Secy.-Treas.

Ga., Jackson—Potato-curing.—Butts County Products Co. will erect sweet-potato-curing house; capacity from 10,000 to 15,000 bu.

Fla., Jacksonville—Amusements.—Manhattan Beach Corp., capital \$25,000, inceptd.; A. T. Vinson, Prest.; F. C. Sawyer, Secy.-Treas.

Fla., Orlando—Engineering, etc.—National Engineering & Contracting Corp., capital \$20,000, inceptd. with Thos. J. Lennen, Prest. and Gen. Mgr.; Robt. Graham, V.-P.; Janet Lennen, Secy.-Treas.

Ga., Macon—Construction.—Co-operative Construction Co., capital \$15,000, inceptd. by T. M. Walker, E. M. Lipford, Asa Bailey.

Ky., Covington—Amusements.—Hippodrome Amusement Co., capital \$75,000, inceptd. by Frank L. Elizabeth and John A. Nordmeyer.

Ky., Franklin—Hardware.—Franklin Hardware Co. increased capital from \$35,000 to \$100,000.

Ky., Hazard—Publishing.—Herald Publishing Co. increased capital from \$8,000 to \$25,000.

Ky., Louisville—Engraving.—Robbins Engraving Co. inceptd. by Frank G. and Cleveland Robbins, John E. Puckett.

Ky., Louisville—Dairy.—Kentucky & Indiana Products Co., Jackson and Fehr Sts., will erect 1-story 50x130-ft. building of brick, steel and concrete construction costing \$30,000; double plant's capacity.

La., New Orleans—Fruit and Transportation.—New Orleans-Bluefields Fruit & Transportation Co., inceptd. with \$2,000,000 capital; Ferdinand Katz interested; has purchased 2 steamships for transportation.

Md., Baltimore—Publishing.—Columbia Publishing Co., 922 Equitable Bldg., capital \$30,000,

inceptd. by Nicholas Beser, Calvert Bldg.; Harry Katz, Elias W. Kidweiler.

Mo., St. Louis—Incinerator.—Contemplate erecting incinerator, capacity 200 tons every 24 hrs., costing \$175,000. Address Board of Aldermen.

N. C., Ashboro—Printing.—L. D. Birkhead has purchased established plant; will operate.

Okla., Jay—Publishing.—Chieftain Publishing Co. (lately noted inceptd.), organized with H. L. Marshall, Prest.; Wm. Davis, V.-P.; Alvin Teague, Secy.-Treas.; G. W. Goad, Directors; will erect 50x30-ft. building, mill construction practically fireproof; bids until May 1; install printing press, new or second-hand. (See Machinery Wanted—Printing Press, etc.)

Okla., Muskogee—Transportation.—Mid-West Transportation Co., capital \$50,000, inceptd. by E. F. Gray, L. F. Wilson, E. M. Tanner.

Okla., Muskogee—Livestock.—Landis-Mosier Livestock Co., capital \$25,000, inceptd. by R. L. and M. L. Mosier, both Muskogee; M. G. Landis, Buffalo, N. Y.

Okla., Oklahoma City—Amusements.—Cascade Amusement Co., capital \$100,000, inceptd. by Ben Barnett, L. C. Smith, Prentiss Price.

Okla., Oklahoma City—Laundry.—C. G. Garvin let contract to Featherstone Construction Co. to erect 2-story-and-basement 88x140-ft. building; Bailey & Alden, Archts., 1207 Colcord Bldg.

Okla., Tulsa—Laundry.—White Swan Laundry Co., capital \$20,000, inceptd. by W. B. and M. Agnes Terry, S. G. Miller.

Okla., Tulsa—Incinerator.—Will vote on \$50,000 bonds to construct garbage disposal plant. Address City Comsn.

S. C., Spartanburg—Laundry.—Dixie Damp Laundry, capital \$20,000, inceptd. with T. K. Hudgens, Jr., Prest.-Treas.; E. O. Page, V.-P.; W. T. Wood, Secy.; install laundry mch. all purchased. (See Machinery Wanted—Motor.)

S. C., Union—Dairy.—Hillcrest Dairy Farm, capital \$20,000, inceptd. with J. F. McLure, Prest.-Treas.; W. S. McLure, Secy.

Tex., Yorktown—Fire Equipment.—Will install electric fire-alarm system; J. W. Nue-mayer, Fire Chief.

Va., Abingdon—Construction.—Sprinkle Supply Co., capital \$10,000, inceptd. with M. E. Sprinkle, Prest.; S. G. Edmondson, Secy.

Va., Damascus—Printing.—Damascus News Co. inceptd. with C. A. Becker, Prest.; J. O. Meade, Secy.-Treas.; R. F. Gentry, Gen. Mgr.; has purchased building and mch.

Virginia—Livestock, etc.—Farm Products Co., 203 Maryland Trust Bldg., Baltimore, Md., organized with Anson F. Granniss, Prest.; Adam F. Bauto, V.-P. and Mgr.; will establish livestock farm, about 5000 acres, to raise cattle, horses, hogs, etc.; plans to erect helpers' houses, barns, power-house, creamery, etc.

Va., Roanoke—Construction, etc.—Eubank & Caldwell, capital \$25,000, inceptd. with B. N. Eubank, Prest.; G. H. Wood, Secy.

W. Va., Huntington—Incinerator.—Will install 2-unit 40-ton capacity incinerator. Address The Mayor.

### Miscellaneous Factories.

Fla., Fort Myers—Cigars.—Antonio Fernandez Cigar Co., Jose Gonzalez, Gen. Mgr., increased capital from \$50,000 to \$90,000.

Fla., Jacksonville—Coffee.—Cheek-Neal Coffee Co. will extend plant; cost \$50,000.

Ga., Atlanta—Lime-Cola.—Lime-Cola Bottling Co. of Atlanta, 186 N. Boulevard, organized with John H. Wright, Mgr.; has \$2000 mill-construction building; purchased



\$30,000 low-pressure machinery; daily output 2400 cases lime-cola. (Lately noted inceptd., capital \$75,000.)

Ky., Pikeville—Bottling.—New Bottling Co. increases capital from \$10,000 to \$20,000.

Md., Baltimore—Lard Substitute.—Cooknut Corp., capital \$250,000, 8 per cent preferred and \$250,000 common stock, inceptd. with W. R. Spruill, Prest.; J. D. Peake, Treas.; both Lexington and Paca Sts.; will erect first unit of factory with daily capacity of 55,260 lbs. lard substitute; let contract for machinery.

Md., Baltimore—Mops, etc.—Easiway Cleaner Co., M. L. Hill, Secy., 405 Courtland St.; contemplates enlarging factory; mfrs. self-wringing mop, scrub brushes and dusters.

Md., Baltimore—Mattresses.—Fred. Walpert & Co., Taylor near 22d St., will rebuild plant burned at loss of \$100,000.

Md., Baltimore—Rubber, etc.—C. H. Friant Rubber Co., 417 W. Franklin St., capital \$50,000, inceptd. by Chas. H. Friant, Chas. P. Thompson, Chas. Hess, Jr.

Md., Baltimore—Coffee.—Morton Coffee Co., Saml. P. Morton, Jr., 118-120 E. Pratt St., capital \$100,000, leased warehouse; will remodel for coffee-roasting plant; install mchry.; Jabez Burns & Sons, Constr. Engrs., New York.

Mo., Carthage—Batteries.—F. N. Steadley let contract to Charles Kyte, to construct 45x40 ft. brick addition to Chain Battery factory.

Mo., Kansas City—Bakery.—Nafziger Baking Co. inceptd. with \$1,000,000 capital.

N. C., Asheville—Butter.—C. C. Proffitt interested in establishing co-operative butter factory.

N. C., Hamlet—Pine Products.—Carolina Pine Products Co., C. R. Poole, Prest., capital \$25,000, will establish plant to extract turpentine, pine tar, pine oil, etc., from pine stumps; install retorts and refinery machinery. Lately noted Poole Turpentine Distilling Co. establish plant. (See Machinery Wanted—Retorts and Refineries; Pumps; Piping.)

N. C., Rocky Mount—Ice Cream.—Chapin-Sacks Mfg. Co., Washington, D. C., will erect branch plant; cost \$85,000.

N. C., Wilmington—Bakery.—Komo Baking Co., 805 N. 4th St., capital \$50,000, inceptd. by I. W. Cooper, Geo. T. Johnson, D. O. Westbrook.

N. C., Winston-Salem—Tobacco.—R. J. Reynolds Tobacco Co. will erect addition to building No. 43.

Tex., Bonham—Candy.—Bonham Candy Co., capital \$10,000, inceptd. by R. S. and J. I. Rodgers, R. T. Lipscomb. (Lately noted erect building.)

Tex., Bowie—Drugs.—Young-Wagner Drug Co., capital \$8000 inceptd. by Fred A. Young, M. B. Wagner and J. M. Elliott.

Tex., Fort Worth—Envelopes.—Fort Worth Envelope Co., capital \$10,000, inceptd. by J. A. Stafford, E. C. and W. C. Lowden.

Tex., Robstown—Bottling.—Robstown Soda Bottling Co., capital \$5,000, inceptd. by H. R. Hopkins and J. Beckley of Houston, Tex.; will establish bottling plant with daily capacity of 200 cases.

Va., Danville—Tobacco.—John E. Hughes Tobacco Co. reorganized with J. S. Cobb, Prest.; J. O. Cobb, Secy.; both Durham, N. C.; E. B. Young, Treas., Danville; increase capital from \$3,000,000 to \$5,000,000.

Va., Danville—Tobacco.—Piedmont Tobacco Co., E. L. Dodson, Prest., increases capital from \$100,000 to \$500,000.

Va., Front Royal—Ice Cream, etc.—Warren Dairy Produce Assn. inceptd. with Clarence

H. Simpson, Prest.; John H. Downing, Treas.; Sam C. Simpson, Secy.

Va., Norfolk—Beverages.—American Specialty Co., capital \$25,000, inceptd. with Phillip Barkas, Prest.; S. Fine, Secy.-Treas.

Va., Richmond—Films.—Richmond Photo-plays capital \$300,000, inceptd. with Wm. F. Griffin, Prest.; J. Hinery Beazley, Secy.-Treas.

Va., Richmond—Clothing.—Richmond Clothiers, capital \$125,000, inceptd. with Saml. L. Kelley, Prest.; John Hirschberg, Secy.

W. Va., Charleston—Overalls.—Charleston Mfg. Co., Charleston St. and Pennsylvania Ave., contemplates enlarging and improving plant.

W. Va., Ellensburg—Novelties.—Insulite Co., Alex. J. Strickler, will erect factory building. (Lately noted inceptd., capital \$50,000.)

W. Va., Huntington—Tobacco.—Producers' Tobacco Co., capital \$225,000, organized with Jno. B. Marshall, Prest.; Jno. E. Biscoe, Secy.; H. G. Proctor, Treas.; plans establishing co-operative scrap tobacco factory.

W. Va., Huntington—Glass.—Specialty Glass Co., organized with E. W. Miller, V.-P. and Treas.; John Roush, Secy.; Wm. Shaw, Mgr.; will erect building; construction by owners; purchased glass presses and cutting machines; will install; mfrs. automobile headlights and bent glass of all kinds. (Lately noted incorporated, capital \$25,000.)

W. Va., Morgantown—Coca-Cola.—Coca-Cola Bottling Co., J. C. Wells, Mgr., let contract to Concrete Steel Bridge Co., Clarksburg, W. Va., to construct 3-story 90x40-ft. bottling plant; Carl Reger, Archt., Traction Bldg.

### Motor Cars, Garages, Tires, Etc.

Fla., Fort Pierce—Garages.—J. I. Killems will erect garages, 104x95 ft.

Fla., Jacksonville—Garage.—Marine Garage, capital \$50,000, organized with A. M. Crabtree, Prest.; J. O. Crabtree, V.-P.; W. R. Crabtree, Secy.-Treas.

Fla., Palm Beach—East Coast Hotel Co. will rebuild burned Royal Poinciana garage building; loss \$150,000.

Fla., South Jacksonville—Garage.—Burwell Motor Co., Blair Burwell, Jr., Prest., will occupy 60x125-ft. garage, to be erected by B. E. Collier; ordinary construction; frame trusses; fireproof roofing; common brick front with face brick veneer; sides and rear walls of plain cement blocks; \$10,000.

Ga., Atlanta—Motors.—Parenti Motors Corp., Buffalo, N. Y., reported to erect assembly plant in the Southeast.

Ky., Louisville—Filling Station.—States Oil Co. will erect \$5000 filling station.

Mo., Carthage—Garage.—F. W. Steadley will erect \$10,000 garage; stone and brick front; 50x100-ft.; Frank I. Gaylor, Contr.

Mo., Sedalia—Filling Station.—J. W. Chapman and H. W. Bledenkoff, Kansas City, Mo., let contract for \$25,000 filling station.

Mo., Springfield—Automobiles.—Old Line Carriage Automobile Works, 447 S. Campbell St., will reconstruct building; \$9000.

Mo., St. Louis—Automobiles.—R. P. Rice Motor Sales Co., 3822 Broadway, will erect 3-story-and-basement 60x122-ft. automobile building; install machine shop, automobile parts and repair works; \$200,000.

N. C., Rocky Mount—Automobile Supplies.—Southern Automobile Supply Co., capital \$50,000, inceptd. with M. H. Robertson, D. D. Lancaster, S. T. Thorne.

N. C., Winston-Salem—Garage.—M. A. Walker will erect garage.

Okla., Oklahoma City—Motors.—Myers Motor Co., capital \$125,000, inceptd. with C. J.

Myers, B. P. Myers; both Kansas City, Mo.; H. A. Barnard, Oklahoma City.

S. C., Florence—Automobile Accessories, etc.—D. W. Alderman, Jr., Inc., capital \$250,000, inceptd. with D. W. Alderman, Jr., T. H. Butler.

Tex., Amarillo—Automobiles.—Automobile Store, capital \$23,000, inceptd. with D. W. Mays, Frank Adkisson, B. H. Stone.

Tex., Dallas—Accessories.—Lawrence Process, capital \$50,000, inceptd. by Pierre Schon, D. C. Kelly, L. L. Henderson.

Tex., Dallas—Counselman Automobile Co., capital \$4000, inceptd. with W. A. Counselman, H. S. Allard, R. B. Allard.

Tex., Fort Worth—Automobile Supplies.—Globe Automobile Supply Co., capital \$5000, inceptd. with S. B. Franklin, H. F. Lynn, J. B. Shelton.

Tex., Houston—Standard Rubber Co., Mason Bldg., inceptd. with E. H. Fleming, Prest., Houston; John T. Powers, Jr., Secy., Alexandria, La.; J. M. Oliver, Treas., Arnaudville, La.; has acquired plant of Universal Tire Co.; mfrs. fabric and cord tires and punctureless inner tubes.

Tex., Vernon—Garage.—White Garage will rebuild burned building; brick; \$15,000; contract let.

Va., Alexandria—Hugo Herfurth, Jr., will erect \$12,000 garage; 1 story and basement.

W. Va., Williamson—Tires.—Tire Service Co., capital \$25,000, inceptd. with H. K. Hunt, K. C. Shelton, A. R. Milby.

### Road and Street Construction.

Ala., Birmingham—Jefferson County will chert surface 18 mi. road; \$90,000 available; Vines & Miers, Contrs.; C. J. Rogers, Engr. (Lately noted.)

Ala., Gadsden.—Etowah County will construct roadway from Gadsden to St. Clair County line; 12 mi.; \$200,000. Address County Comms. (Lately noted.)

Ala., Huntsville.—Madison County will rebuild county pikes; vote about May 1 on \$300,000 bonds; C. H. Pulley, Prest. Board of Revenue. (Lately noted.)

Ark., Little Rock.—Will construct 10,200 sq. yds. concrete pavement, curbs and storm sewers in Ridgeway Improvement Dist.; \$51,000 available; McEachin & McEachin, Contrs., Southern Trust Bldg.; Lund & Hill, Engrs., Southern Trust Bldg. (Lately noted inviting bids.)

Fla., Bradenton.—Manatee County will grade and place shell or rock in ruts on road beginning at Venice; 9 mi.; bids until Apr. 4; Robt. H. Roesh, Clk. County Comms. (See Machinery Wanted—Road Construction.)

Fla., De Land.—May pave streets; vote on bonds; reported. Address The Mayor.

Fla., Fort Pierce.—State Roads Dept., Tallahassee, Fla., let contract to Okeechobee Construction Co., Okeechobee, Fla., for 18 mi. Fort Pierce-Okeechobee road. (Lately noted.)

Ky., Murray.—Calloway County will construct roads; \$350,000 available. Address County Comms.

Fla., Pensacola.—Escambia County let contract to Taylor Co., \$30,000, for 5-mi. road between Millview and Lillian. Address County Comms. (Lately noted.)

Fla., St. Petersburg.—Let contract to Georgia Engineering Co., Augusta, Ga., for paving Crown, 11th Ave., 11th St., etc.; 10 blocks; G. B. Shepard, Director Finance. (Lately noted inviting bids.)

Ga., Atlanta.—Will construct concrete paving; \$125,000; Case & Cothran, Contrs.; H. L. Collier, Engr. and Ch. of Constr.

Ga., Calhoun.—Gordon County will construct

roads; vote Apr. 7 on \$300,000 bonds; J. D. Keever, Commr. Roads and Revenues. (Supersedes recent item.)

Ga., College Park.—Will pave streets and construct sidewalks; vote April 23 on \$10,000 bonds; W. W. Bateman, Mayor.

Ga., LaGrange.—Will construct 25,000 sq. yds. street pavement; watermains, etc.; bids until Apr. 14; G. H. Sargent, City Engr. (See Machinery Wanted—Paving.)

Ga., Ringgold.—Catoosa County let contract to Nichols & Co., Atlanta, Ga., at \$75,000 for 8½ mi. pipe road from Ringgold to Tennessee line; L. R. Wiggins, Chrmn. County Comms. Roads and Revenues. (Lately noted inviting bids.)

Ky., Whitesburg.—Letcher County will construct 13 mi. county road from Blackey to Sandlick Gap; 3 mi. from mouth Crafts Colly to Mayking; 2 mi. from Hammond to Jenkins; 2 mi. from Jenkins to Pound Gap; bids until Apr. 11; Fess Whitaker, Judge. (See Machinery Wanted—Road Construction.)

La., Alexandria.—Will pave sidewalks on Levin and 7th Sts.; concrete; bids until Apr. 4; V. M. Ake, City Secy. (See Machinery Wanted—Paving.)

La., St. Bernard.—St. Bernard Parish will reconstruct Frisco shell road; 3 mi.; sell \$35,000 bonds. Address Police Jury.

La., St. Martinsville.—St. Martin Parish will sell \$300,000 bonds for road construction; R. J. Blenvu, Prest. Police Jury.

Md., Baltimore.—Will expend \$100,000 for repairs to sheet-asphalt street and roads under special contracts with American Paving Co., P. Flanigan & Sons and Baltimore Asphalt Block & Tile Co. Address Highways Engr. Christhill.

Md., Frederick.—State Roads Comsn., 601 Garrett Bldg., Baltimore, will construct 2.3 mi. concrete highway on Georgetown pike from bridge over Monocacy River toward Urbana; low bidder, M. J. Grove Lime Co. at \$50,580.80. (Lately noted inviting bids.)

Miss., Hattiesburg.—Let contract to Southern Paving Construction Co., Chattanooga, Tenn., for paving Bushman and E. 3d Sts.; 10,325 sq. yds.; brick; T. E. Batson, Mayor. (Lately noted inviting bids.)

Miss., Pascagoula.—Jackson County and City of Moss Point will hard-surface Randall Ferry Rd.; 1 mi. Address County Comms. and The Mayor.

Miss., Senatobia.—Tate County will construct ½-mi. road leading from Wyatte to Marshall County line; bids until Apr. 4; M. H. Thompson, Clk. Supvrs. (See Machinery Wanted—Road Construction.)

Mo., Fredericktown.—Madison County will construct St. Louis-Poplar Bluff Rd.; 8.21 mi.; gravel; Federal Aid Project 101, Section A; bids until Apr. 2; M. S. Murray, Div. Engr., Sikeston, Mo. (See Machinery Wanted—Road Construction.)

N. C., Burlington.—Will pave streets with sheet asphalt, bitulithic, asphaltic concrete or cement concrete; 50,000 sq. yds. pavement; 40,000 lin. ft. combined concrete curb and gutter, etc.; bids until Apr. 14; R. E. L. Holt, Chrmn. Street Committee; Ludlow Engrs., Winston-Salem, N. C. (See Machinery Wanted—Paving.)

N. C., Concord.—Let contract to Major W. A. Foil for ½ mi. sidewalks on McGill and Corbin Sts.; Geo. H. Richmond, City Clk. and Treas.

N. C., Greenville.—Pitt County will sell \$500,000 bonds for road construction.

N. C., Mocksville.—Will construct 7000 sq. yds. pavement, concrete or concrete base with asphaltic top; 4000 sq. yds. 2-course concrete sidewalk; 3500 lin. ft. concrete or granite

curb, etc.; bids until Apr. 1; G. E. Horn, Mayor; N. S. Mullican, Engr. (See Machinery Wanted—Paving.)

N. C., Monroe.—Will pave streets; 15,000 sq. yds. sheet asphalt or Topeka paving on 4-in. concrete base; 2200 lin. ft. cement combined curb and gutter, etc.; bids opened Mch. 26; John C. Sikes, Mayor.

N. C., Raleigh.—Will construct 15,000 lin. ft. straight combined curb and gutter, 1500 lin. ft. curved combined curb and gutter, etc.; bids until Apr. 1; W. L. Dowell, City Clk. (See Machinery Wanted—Paving.)

N. C., Raleigh.—Will improve streets; invite bids on 18,000 lin. ft. curbing and gutters in Glenwood and Boylan Hts.; \$20,000; John B. Bray, Commr. Public Works.

N. C., Marion.—McDowell County let contract to Erwin Patton and Perry Alexander, Asheville, N. C., for highway between Old Fort and Nealsville; Hugh F. Little, Chrmn., McDowell County Highway Comsn. (Lately noted inviting bids.)

N. C., Waynesville.—Haywood County will sell \$100,000 bonds for road and bridge construction. Address County Comms.

N. C., Wilkesboro.—Wilkes County will sell \$275,000 bonds for road construction; J. C. Wallace, Clk. County Comms.

Okla., Hominy.—Will pave streets; 32 blocks. Address The Mayor.

Okla., Tulsa.—Citizens' Paving Co., capital \$25,000, incptd. with J. J. Burke, Saml. A. Boorstin, F. J. Currier. (Supersedes recent item.)

Okla., Tulsa.—Will pave Yorktown Ave., 16th Pl. 16th St. and Peoria Ave.; bids until Mch. 31; Mrs. Frank Seaman, City Auditor. (See Machinery Wanted—Paving.)

S. C., Kingstree.—Will pave streets; vote Mch. 29 on \$160,000 bonds. Address The Mayor. (Supersedes recent item.)

S. C., Rock Hill.—Will sell \$100,000 bonds for street paving. Address The Mayor.

Tenn., Athens.—May pave Jackson, White, Main and Washington Sts.; R. P. Knight, Mayor.

Tenn., Bolivar.—Hardeman County plans to construct 14.6 mi. bituminous macadam road from Bolivar to McNairy County line; \$350,000.

Tenn., Carthage.—Smith County plans to construct 15 mi. bituminous macadam road from Carthage to Wilson County line; \$300,000; M. E. Bird, County Engr.

Tenn., Cleveland.—Will improve streets, avenues, etc.; 56,610 sq. yds. paving; 23,895 lin. ft. curbing; 6990 sq. yds. sidewalks, etc.; bids until April 7. L. L. Woollen, Mayor. (See Machinery Wanted—Paving.)

Tenn., Dyersburg.—Dept. Highways, State of Tennessee, Nashville, Tenn., will construct 8.28 mi. State Highway No. 12 between Dyersburg and Newbern, Dyer County; 77,682 sq. yds. bituminous concrete, rock asphalt; bridge over 20-ft. span, etc.; bids until Apr. 8; W. P. Moore, Ch. Engr., Nashville, Tenn. (See Machinery Wanted—Road Construction.)

Tenn., Johnson City.—Will pave streets with concrete, asphalt or asphalt concrete; 50,000 sq. yds. pavement; 31,000 lin. ft. curb and gutter; sanitary sewers, etc.; bids until Apr. 27; W. O. Dyer, Commr. Streets and City Engr. Lately noted. (See Machinery Wanted—Paving.)

Tenn., Sparta.—Dept. Highways, State Tennessee, Nashville, Tenn., will construct 13.56 mi. State Highway No. 1 between Sparta and Cumberland County line, White County; bids until Apr. 8; W. P. Moore, Ch. Engr., Nashville. (See Machinery Wanted—Road Construction.)

Tex., Amarillo.—Potter County let road contracts as follows: Willite Construction Co.,

Houston, Tex., \$280,000, pave 16 mi.; Standard Construction Co., Dallas, Tex., \$203,000, pave 12 mi.; McKnight & Haymer, Amarillo, gravel hauling; R. C. Johnson, County Judge; Nagle-Witt-Rollins Engineering Co., Engr. (Lately noted inviting bids.)

Tex., Baird.—Callahan County will construct roads; vote Apr. 16 on \$1,000,000 bonds. Address County Comms.

Tex., Big Spring.—Will pave streets and complete water-works; vote April 5 on \$60,000 bonds. Address The Mayor.

Tex., Big Spring.—Bureau Public Roads, Washington, D. C., approved application and project statement for proposed construction of 32 mi. Bankhead highway in Howard County; surface with 16-ft. gravel; \$292,403.65; J. T. Brooks, County Judge; R. W. Baker, County Engr. (Lately noted.)

Tex., Dallas.—Will pave Knox St.; bitulithic; F. W. Wozencrapp, Mayor.

Tex., Del Rio.—Del Rio County will construct 7.3 mi. 16-ft. gravel road on Highway No. 12; \$50,580; R. T. Hunnicutt, County Judge; G. M. Jowers, County Engrs.

Tex., Fort Worth.—Let contract to Texas Bitulithic Co., Dallas, Tex., for 140,000 sq. yds. street paving; \$494,200; W. D. Davis, Mayor; D. L. Lewis, City Engr. (Lately noted inviting bids.)

Tex., Greenville.—Ch. Engr., U. S. Bureau Public Roads, Washington, D. C., approved plans for Federal Aid Project No. 171 involving 11.1 mi. 16-ft. bituminous macadam road on State Highway No. 1, Hunt County; \$406,831.43; O. P. McWhirter, County Judge; A. D. Duck, County Engr.

Tex., Hillsboro.—Hill County will construct 9.91 mi. Highway No. 2 in Itasca Road Dist. No. 2; low bidder Dean Word, Teague, Tex., at \$64,413.83 for grading and surfacing; W. L. Wray, County Judge; Hillsboro. (Lately noted inviting bids.)

Tex., Houston.—Harris County will repair Crosby road; bids opened Mch. 28; H. L. Washburn, County Auditor.

Tex., Jasper.—Jasper County will sell \$100,000 bonds for road construction; J. E. Gill, Chrmn. Highway Comsn.

Tex., Marlin.—Falls County let contract to Cook & Arrington, Crockett, Tex., and Harris & Powell, Tyler, Tex., for 46 mi. roads, at \$308,000; 43,633 cu. yds. gravel surfacing; E. M. Dodson, County Judge; Guy W. Courter, County Engr. (Lately noted inviting bids.)

Tex., McKinney.—Collin County, O. T. Murray, County Judge, applied to State Highway Dept. for \$60,385 State Aid for construction and completion of 25 mi. State Highway No. 6; F. W. Cawton, County Engr.

Tex., McKinney.—Collin County let contract to H. T. Hallman, at \$5,043.78 to construct 2½-mi. highway in N. Roysse Dist.; F. W. Cawton, County Engr. (Lately noted inviting bids.)

Tex., Orange.—State Comptroller registered \$7000 of 5 per cent 5-40-year bonds.

Tex., Pittsburgh.—Camp County will construct roads; 435,000 bonds available; J. A. Efred, County Judge, Pittsburg; H. C. Wilder, County Engr.

Tex., Port Lavaca.—Let contract to A. S. Adams, Houston, Tex., at \$109,505.75, for street improvements and sea wall. Address The Mayor.

Tex., San Antonio.—Ch. Engr., Bureau Public Roads, Washington, D. C., approved plans for construction of 5.1 mi. State Highway No. 27; surface with 16-ft. bituminous macadam; \$69,911.20; Augustus McCloskey, County Judge; C. E. Hoff, County Engr.

Tex., San Antonio.—Bexar County will surface 6½ mi. Bandera Rd.; bids until Apr. 4; Augustus McCloskey, County Judge.

Tex., San Antonio.—Kenneth Wimer and N. S. Dickinson will pave streets, sidewalks, etc., in Woodlawn Place.

Tex., Seymour.—Will pave 3 additional blocks; contract let for 8 blocks. Address The Mayor.

Tex., Smithville.—Let contract to W. C. Moore for regrading and regravelling old and building new streets; \$20,000 available.

Tex., Stanton.—Bureau Public Roads, Washington, D. C., approved project statement for construction of 12 mi. Bankhead highway in Martin County; surface with 16-ft. gravel; \$117,089.50; A. G. Odum, County Judge, Stanton, Tex.; R. W. Baker, County Engr., Big Spring, Tex.

Va., Chatham.—Virginia State Highway Comsn., G. P. Coleman, Commr., 116 S. Third St., Richmond, Va., let contract to G. P. Clay, Richmond, Va., for 4.26 mi. bituminous macadam road, Pittsylvania County; Virginia Project No. 86; C. L. Scott, Resident Engr., Lynchburg, Va. (Lately noted inviting bids.)

Va., Martinsville.—Henry County let contract to G. T. Franklin, Bassetts, Va., for 10 mi. sand-clay road; \$250,000 available; H. G. Whittle, County Engr. (Lately noted.)

Va., Richmond.—Will pave 125,000 sq. yds. streets; durax block, sheet asphalt, granite block and concrete; \$500,000 available; bids about April 10; Allen J. Saville, Director Public Works; Thos. B. Nurrick, Engr. (See Machinery Wanted—Paving.)

Va., Rustburg.—Virginia State Highway Comsn., 116 S. 3d St., Richmond, Va., will construct 5.4 mi. bituminous macadam road on State Rd. No. 14, Campbell County; Virginia Project No. 84; bids until Apr. 7; G. P. Coleman, State Highway Commr., Richmond. (See Machinery Wanted—Road Construction.)

Va., Rustburg.—Campbell County let contract to L. Bennington, 911 Cabell St., Lynchburg, Va., to construct ¾ mi. bituminous macadam road in Brookville Dist.; \$16,000 available; W. F. Day, County Engr., 703 Church St., Lynchburg, Va. (Lately noted inviting bids.)

Va., Roanoke.—Let paving contracts as follows: Campbell & Peters, 34,000 lin. ft. concrete and granite curbing and 27,000 lin. ft. concrete and brick gutter; Tinsley Construction Co., 14,000 sq. yds. paving, concrete base for sheet asphalt; W. P. Hunter, City Mgr. (Previously noted inviting bids.)

Va., Salem.—Virginia State Highway Comsn., G. P. Coleman, Commr., 116 S. Third St., Richmond, Va., let contract to Pace Construction Co., Roanoke, Va., for 9.25 mi. State Rd. No. 10, bituminous macadam; Roanoke and Botetourt Counties; R. D. Bryant, Engr., Roanoke. (Lately noted inviting bids.)

Va., Staunton.—Virginia State Highway Comsn., 116 S. 3d St., Richmond, Va., will construct 6.42 mi. grading on State Rd. No. 9, Augusta County; alternate bids for grading and bituminous macadam surfacing; Virginia Project No. 69; bids until Apr. 7; G. P. Coleman, State Highway Commr., Richmond. (See Machinery Wanted—Road Construction.)

Va., Suffolk.—Virginia State Highway Comsn., G. P. Coleman, Commr., 116 S. Third St., Richmond, Va., let contract to Allport Construction Corp., Richmond, Va., for 7.42 mi. concrete road, 16-ft. wide; Nansemond and Norfolk Counties; Virginia Project No. 64-A; Jno. R. Sneed, Engr., Suffolk. (Lately noted inviting bids.)

Va., Wise.—Virginia State Highway Comsn., 116 S. 3d St., Richmond, Va., will construct 7.06 mi. bituminous macadam road on State Rd. No. 11, Wise County; Virginia Project

No. 94; bids until Apr. 7; G. P. Coleman, State Highway Commr., Richmond. (See Machinery Wanted—Road Construction.)

Va., Woodstock.—Virginia State Highway Comsn., 116 S. 3d St., Richmond, Va., will construct .65 mi. bituminous macadam road on State Rd. No. 3, Shenandoah County; Virginia Project No. 102; bids until Apr. 7; G. P. Coleman, State Highway Commr., Richmond. (See Machinery Wanted—Road Construction.)

W. Va., Bluefield.—Will construct granolithic sidewalks; bids until April 8; J. T. Akers, City Recorder. (See Machinery Wanted—Paving.)

W. Va., Elkins.—Will construct sidewalks on 11th, Court, Diamond and other streets; bids until Apr. 7; Geo. Henry, City Clk. (See Machinery Wanted—Paving.)

### Sewer Construction.

Ala., Tuscaloosa.—Let contract to Sullivan, Long & Hagerty, Bessemer, Ala., to extend sewer system; construct 9434.5 ft. 6 and 8-in. sanitary sewers and 23 manholes; cost \$6,606.29; W. H. Nicol, City Engr. (Lately noted bids until Mch. 22.)

Fla., De Land.—May vote on bonds to install sewer system. Address The Mayor.

Fla., St. Augustine.—Will issue \$425,000 sewer and water systems extension bonds; Eugene Masters, City Mgr. (Previously noted.)

Fla., Tampa.—Will construct 1640 lin. ft. 6-in. sanitary sewers, 60-4x6-in. Y connections and 4 manholes in alleys from Swann Ave. to Horatio St.; bids until Mch. 29; Chas. H. Brown, Mayor-Commr. (See Machinery Wanted—Sewers.)

Ga., College Park.—Will vote Apr. 23 on \$10,000 sewer outfall bonds; W. W. Bateman, Mayor.

Ga., La Grange.—Will construct storm sewers, manholes and inlets; bids until Apr. 14; D. A. Leman, Clk.-Treas.; G. H. Sargent, City Engr. (See Machinery Wanted—Sewers.)

Miss., Macon.—Will construct sewer system at courthouse; bids until Apr. 4; John A. Tyson, Chancery Clk. (Lately noted bids until Mch. 7.)

Mo., Independence.—Will construct sewage-disposal plant; plans voting on \$150,000 bonds; Burns & McDonald, Engrs., 400 Interstate Bldg., Kansas City, Mo. (Lately noted.)

N. C., Gastonia.—Let contract to Tucker & Laxton, Charlotte, N. C., to construct filter plant with 2,000,000-gal. capacity every 24 hours; reinforced concrete building; cost \$91,000; R. G. Cherry, Mayor; Wm. M. Platt, Engr., Durham, N. C. (Lately noted bids until Mch. 15.)

N. C., Mocksville.—Will improve sewer and water systems; construct 12,000-ft. 6-in. vitrified sewer pipe, with manholes; install flush tanks and appurtenances; bids until Apr. 1; G. E. Horn, Mayor; N. S. Mullican, Engr.; will sell \$55,000 bonds. (See Machinery Wanted—Sewers.)

Okla., Enid.—Will construct 250 lin. ft. 45-in. segment block storm sewers and 4331 lin. ft. 8-in. vitrified sewer pipe; bids opened Mch. 25; R. T. Williams, City Clk.

Okla., Enfield.—Let contract to Comstock-Smedley Co., Tulsa, Okla., to construct sewers; Hughes Engineering Co., Engr., Tulsa, Oklahoma.

Okla., Tulsa.—Will construct sanitary sewer with laterals, connections and appurtenances in Dist. No. 176, Ordinance No. 2133; bids until Mch. 30; Mrs. Frank Seaman, City Auditor. (See Machinery Wanted—Sewers.)

S. C., Kingstree.—Will vote Mch. 29 on \$15,000 sewer-extension bonds. Address The Mayor. (Supersedes recent item.)

Okla., Ponca City.—Let contract to Ammerman & Snyder, Wichita Falls, Tex., to construct storm sewers in 3d St.; cost \$8556.00; Hugh Johnston, City Mgr.

Okla., Wynona.—Let contract to Max Cunningham, Tulsa, Okla., to install sewer, sewage-disposal plant and water-works; E. O. Estes, City Clk.; Green Engineering Co., Engr., Oklahoma City. (Lately noted bids until Feb. 21.)

S. C., Charleston.—Contemplates issuing bonds to extend sewer system. Address Mayor Grace.

Tenn., Johnson City.—Will construct 20,700 lin. ft. 6 and 8-in. sanitary sewers, 4300 lin. ft. 8 to 24-in. storm sewers, 32 manholes, 40 catch basins and concrete bridge; bids until Apr. 27; W. B. Ellison, Mayor; W. O. Dyer, Commr. of Streets and City Engr. (Lately noted vote on bonds. (See Machinery Wanted—Sewers.)

Tex., Dallas.—Will construct 10-in. sewer in Santa Fe Ave. from Fitzhugh to Augusta; cost \$10,022. Address Board of Commrs.

Tex., Comanche.—Voted \$20,000 bonds to enlarge sewer system; J. R. Eaves, Mayor. (Lately noted to vote.)

Tex., Farmersville.—Will vote Apr. 29 on \$100,000 sewer and water bonds. Address The Mayor.

Tex., Graham.—Voted \$210,000 sewer and water improvement bonds. Address The Mayor.

Tex., Weatherford.—Will issue \$25,000 sewer bonds; Nolan Queen, Mayor; Geo. M. Parker, City Engr.

Va., Lynchburg.—Will construct sewers on Blackford, Bailey, Anne, Grace and 19th Sts., etc.; total cost \$7875; City Mgr. Beck.

W. Va., Huntington.—Will install sewer system; construct 12-in. vitrified lateral sewers in Nine and One-Half Alley, and in Marshall Ave.; bids until Apr. 11; A. B. Maupin, City Engr.; Mat. Miser, Commr. Streets and Sewers. (See Machinery Wanted—Sewers.)

W. Va., Huntington.—Will install sewer system; A. B. Maupin, Engr., City Bldg.; Mat. Miser, Street Commr.; plans drawn.

### Telephone Systems.

Tex., Davilla.—Davilla Telephone Co. incptd. by W. M. Farmer, W. N. Malone, B. H. Keith.

Va., Edinburg.—Farmers' Mutual Telephone System, N. F. Snarr, Secy., increased capital from \$15,000 to \$25,000.

Va., Virginia Beach.—Navy Dept., Bureau of Yards and Docks, Washington, D. C.; construct additional buildings at naval radio station, including 3 steel 150-ft. towers, operating station, etc.; Newport News Engineering & Construction Co., lowest bidder. (Bids lately noted.)

### Textile Mills.

N. C., Charlotte.—Sheeting.—Chadwick-Hoskins Co., H. H. Boyd, Gen. Supt., increased capital from \$3,000,000 to \$5,500,000.

N. C., Lenoir.—Yarns.—Hudson Cotton Mfg. Co., B. B. Hayes, Supt., increases capital from \$125,000 to \$300,000.

N. C., Lenoir.—Yarns.—Whitnel Cotton Mill Co., T. A. Wright, Supt., increased capital from \$150,000 to \$300,000.

N. C., Statesville.—Hosiery.—Hall's Hosiery Mills, W. F. Hall, Propr., acquired Liberty Hosiery Mfg. Co.'s plant; has 2-story 100x50-ft. brick building with 60x25-ft. annex; initial installation, 60 knitting machines; purchased \$25,000 mchy.; 30 H. P. electric power; belt drive; daily capacity, 240 dozen pairs hosiery.



**Water-Works.**

Fla., De Land.—May vote on bonds to extend and improve water-works. Address The Mayor.

Fla., Fort Lauderdale.—Let contract to E. E. Bush for 2700 ft. of mains to extend water-works; bids invited on auxiliary pumping equipment and more mains. Address The Mayor. (Previously noted voted \$20,000 bonds.)

Fla., Jacksonville.—Let contract to Allen Contracting Co. to install electrically-driven pump with 24-hour capacity of 8,000,000 gals.; cost \$14,000. Address The Mayor.

Fla., Key West.—Maurice B. Gorsuch, Geo. S. Engle and Carl E. Aubuchon of Kansas City, Mo., interested in plans to construct fresh-water pipe line from mainland to Key West.

Fla., Pensacola.—Navy Dept., Bureau of Yards and Docks, Washington, D. C., will construct water-works plant (Spec. No. 4385); has plans.

Fla., St. Augustine.—Will issue \$425,000 water and sewer system extension bonds; Eugene Masters, City Mgr. (Previously noted.)

Ga., La Grange.—Will construct 2-mi. cast iron water mains, together with connections to existing mains; install 250 tons cast iron pipe and specials, valves and hydrants; bids until Apr. 14; D. A. Leman, Clk.-Treas.; G. H. Sargent, City Engr. (See Machinery Wanted—Water-works Equipment.)

La., Bossier.—Will issue \$30,000 bonds to install water-works; bonds voted 4 years ago. Address The Mayor.

La., Franklinton.—Let contract to Alonzo B. Hayden to construct 16x16 ft. wood frame, metal siding pumping equipment building, 50,000-gal. concrete reservoir, 50,000-gal. 125-ft. steel tank; install oil engine pumping mch.; total cost \$38,002.33; C. J. Gayer, Mayor; Xavier A. Kramer, Const. Engr., Magnolia, Miss. (Lately noted bids until Mch. 24.)

Mo., Holden.—Will vote Apr. 15 on \$25,000 water-works improvement bonds; Jess Bower, City Clk.; E. T. Archer & Co., Engrs., 612 New England Bldg., Kansas City, Mo.

Mo., Kirksville.—Plans improving water-works; relay 2, 3, and 4-in. mains; install fire-hydrant plugs; I. N. Capps, Engr.; Mayor Neil. (Lately noted contemplated voting on bonds.)

Mo., Brookfield.—Voted \$140,000 bonds to construct 700,000 gals. per day filter plant and impounding reservoir; E. E. Harper, Engr., 301 Park Ave., Kansas City, Mo. (Lately noted to vote.)

N. C., Graham.—Will install 2 pump stations, etc.; bids until March 30; Norcross & Keis, Engrs., Atlanta, Ga. Address The Mayor.

N. C., Mocksville.—Will improve water and sewer systems; install 4500 lin. ft. 6-in. cast-iron bell and spigot water mains, with fire hydrants and appurtenances; 90,000-gal. concrete reservoir, and 25,000-gal. tank on 65-ft. tower; bids until Apr. 1; G. E. Horn, Mayor; N. S. Mullean, Engr.; will sell \$55,000 bonds. (See Machinery Wanted—Water-works.)

Okla., Wynona.—Let contract to Max Cunningham, Tulsa, Okla., to install water-works, sewer and sewage-disposal plant; E. O. Estes, City Clk.; Green Engineering Co., Engr., Oklahoma City. (Lately noted bids until Feb. 21.)

S. C., Kingstree.—Will vote Mch. 29 on \$25,000 water-works extension bonds. Address The Mayor. (Supersedes recent item.)

Tex., Big Springs.—Will vote Apr. 5 on

\$60,000 bonds to complete water-works and improve streets. Address The Mayor.

Tex., Corpus Christi.—Plans installing water-supply system. Address The Mayor.

Tex., Farmersville.—Will vote Apr. 20 on \$100,000 water and sewer bonds. Address The Mayor.

Tex., Graham.—Voted \$210,000 water and sewer improvement bonds. Address The Mayor.

Tex., Texarkana.—Will improve water-supply system. Address The Mayor.

Va., Coeburn.—Coeburn Utility & Mfg. Co., organized with W. S. Dodd, Pres.-Mgr.; J. M. Quillin, Jr., Secy.-Treas. (See Machinery Wanted—Pipes, Pumps.)

**Woodworking Plants.**

Ark., Newport—Shuttles.—Litchfield Shuttle Co., Southbridge, Mass., will make plant improvements, extend millroom 10 ft. and install additional rip-saw table; increase size of warehouse 32x46 ft., storage capacity 150,000 blocks; daily capacity of plant to be from 40,000 to 50,000 shuttles.

Fla., Arcadia.—Auto Tops.—Arcadia Auto Top Co., Tom Alderman, Prop., and W. B. Holmes in charge; will mfr. auto tops, etc.

Ga., Bellevue (P. O. Macon)—Pianos, etc.—Bellevue Piano Co., E. D. Ponder, will erect plant for the mfr. of grand and upright pianos.

Ky., Louisville—Hardwood.—Lanham Hardwood Flooring Co., 1419 S. 12th St., will erect drykiln costing about \$10,000. (Previously noted to rebuild burned plant.)

Md., Hagerstown—Organs, Pianos, etc.—M. P. Moller, capital \$200,000, inceptd. by Matthew P. Moller, J. Otterbein Funkhouser, Elden O. Schulenberg; mfr. organs, pianos and phonographs.

Miss., Wesson—Crates, etc.—Fred Fure and William Knapp will erect sawmill, planer and box factory; install mch. for mfr. of vegetable crates, boxes, etc.

Va., Radford—Veneer.—Radford Veneer Corp., A. P. Goldsmith, Pres., increased capital from \$15,000 to \$150,000.

Va., Richmond—Auto Tops.—National Auto Top Co., 808 W. Broad St., increased capital from \$15,000 to \$25,000; contemplate installing metal body mch.; has woodworking department.

**Fire Damage.**

Ala., Birmingham.—E. T. Beatty's machine shop; loss \$50,000.

Ala., Tuscaloosa.—E. L. Dodson's residence on Hargrove Rd.

Ala., Sylacauga.—Peace Bros. grist mill and saw mill.

Ala., Uniontown.—F. Meyer's buildings occupied by L. P. Eldridge & Co., Dr. P. H. White, Southern Cafe and Harris Pressing Club; loss \$20,000.

Ark., Clarendon.—Chicago Mill & Lumber Co.'s drying department; loss \$150,000.

Ark., Mountain Home.—Chas. McGuire's dwelling, about 4 mi. from Mountain Home.

Fla., Palm Beach.—Royal Poinciana Garage's building, owned by East Coast Hotel Co.; loss \$150,000.

Ga., Ambrose.—Fellers' Drug Store; Lur-tell's Department Store; loss \$25,000.

Ga., Atlanta.—Atlanta Printing Co.'s plant; Atlanta Steam Dry Cleaning Co.'s plant; Columbia Confectionery & Ice Cream store; James L. Holloway's jewelry store.

Ga., Columbus.—C. Jordan Brooks' reside

Ga., Colquitt.—Dancer Cotton Warehouse and W. L. Geer peanut warehouse; loss \$50

Ga., Quitman.—Thomas Elevator Co.'s pl W. H. Thomas, Owner; loss \$100,000.

Ga., Social Circle.—Wiley warehouse.

Ga., Warrenton.—Ford Building, owned C. R. Fitzpatrick; W. P. English & C livery stables; Dr. F. B. Ricketson's sto Whiteley's warehouse; loss \$200,000.

Ky., Lexington.—Hust & Co.'s store; loss on building, \$25,000.

Ky., Louisville.—Hurst & Co.'s fruit and storage warehouse.

Ky., Middlesboro.—Cumberland Hotel; loss \$27,000. Address The Prop.

Md., Baltimore.—Fred. Walpert & Co.'s plant, Taylor St., near 22d St.; loss \$100,000.

Md., Hamsville.—M. J. Grove Lime Co.'s stove factory and sawmill; loss \$300.

Mo., Kansas City.—Kansas City Second-hand Barrel Co.'s plant; loss \$50,000.

Mo., St. Louis.—Southern Mfg. Co.'s plant, Albert Seipman, Mgr., 7 N. Main St.; loss \$20,000.

N. C., Charlotte.—Merchants and Farmers' Bonded Warehouse; S. L. Sloan, Secy.-Treas.

N. C., Stony Point.—R. L. Fincannon's store.

N. C., Wadesboro.—A. H. Harrison's grocery store.

Okla., Muskogee.—Rambling Store; loss \$75,000. Address The Proprietor.

Okla., Muskogee.—Severs Block, occupied by S. B. Locke & Co., Levy & Sons, H. C. Wiperman and others.

S. C., Fork Shoals (R. D. from Fountain Inn).—Virginia Mfg. Co.'s ginnery; loss \$12,000 to \$15,000.

S. C., Elleree.—First National Bank Bldg.; loss \$15,000; Stack Co.'s building; Ulmer-Irick Co.'s building and other structures.

S. C., Richburg.—J. D. Drennan's store and 2 warehouses; Nelson McWalter's livery stable; Richburg Drug Store.

S. C., Winnsboro.—Southern Ry. Co.'s passenger station; J. S. Lemond, Ch. Engr., Innes East, M. W. & S., Charlotte, N. C.

S. C., York.—Ed. Whisonant's residence.

Tenn., Columbia.—L. D. Love's residence on Riverbend Farm.

Tex., Breckenridge.—Belmont and Sutherland Hotels; loss \$100,000. Address The Proprietor.

Tex., Breckenridge.—Cooper & Henderson's pumping-house; Texas Co.'s pumping station; Breckenridge Oil & Refinery Co.'s plant; Brown Oil Co.'s derrick, etc.; Humble Oil Co.'s gathering line; loss from \$100,000 to \$150,000.

Tex., Dallas.—Shiels & Shield Planing Mill's machine shops; loss \$30,000.

Tex., Easton.—A. D. Lours' Union Cafe on N. Lamar St.; loss \$10,000.

Va., Boonsboro.—James Howard's residence.

Va., Norfolk.—Omohundro Avenue School; loss \$150,000; Richard A. Dobie, Div. Supt., Bankers' Trust Bldg.

W. Va., Logan.—Logan Machine Shops; loss \$35,000.

W. Va., Ranson.—D. S. Hughes store occupied by Sages Bros.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

# BUILDING NEWS

## BUILDINGS PROPOSED

### Apartment-Houses.

Fla., Fort Pierce.—Jas. I. Kellems will erect 2-story apartment and business building on Orange Ave.; lately noted; 36x45 ft.; frame and stucco; asphalt roof; wood floors; hollow fireproof tile; plans and construction by owner; also considering erecting garage and apartment building, 104x95 ft. (See Machinery Wanted—Steel Beams.)

Fla., Miami.—N. Lawrence Stevenson and P. G. Davis, Contr., 34 N. Bay Shore Drive, will erect 4-story apartment-house in Fort Dallas Park; 120x240 ft.; 31 suites; Hampton & Reinert, Archts.

Fla., Miami.—Walter Waldin will erect concrete apartment-house on N. E. 14th Ter.; cost \$36,000.

Md., Baltimore.—A. T. Carrozza, Calvert Bldg., plans to erect Hopkins Apartment Hotel at St. Paul and 31st Sts.; cost \$1,600,000; 495 guest rooms; 10 servants rooms; 9 stories on one side and 8 stories on other; steel frame; reinforced concrete arches; exterior finish of buff brick, terra cotta and Marvela marble; Frederic A. Fletcher, Archt., 407 N. Charles St.; bids opened in 10 days.

N. C., Charlotte.—F. M. Redd plans to erect 3 or 4-story apartment-house at Tryon and W. Palmer Sts.; cost \$100,000 to \$150,000; 16 or 18 suites.

N. C., Charlotte.—Rankin Apartments, John C. Rankin, Prest., 31 S. Church St., will erect 12-story apartment-house; fireproof; reinforced concrete; 17 apartments on each floor; portion of main floor for apartment offices and 8 reception-rooms; combination summer and winter roof garden; cost \$1,000,000; Willard G. Rogers, Archt. (Lately noted.)

Okla., Tulsa.—I. J. Buck will erect \$15,000 apartment-house at 238 W. 13th St.; 3 stories and basement; brick; hardwood floors; steam heat.

Tex., Dallas.—J. W. Norman, 419 W. Jefferson St., will erect \$12,000 apartment-house at 1724 Poplar St.; stucco; 34x54 ft.; 2 stories; 16 rooms; 4 suites; asbestos built-up roof; double-edge grain pine floors; gas heat; electric lights; plans and construction by owner. (Lately noted.)

Tex., Dallas.—Mrs. E. K. Brown will erect \$12,000 apartment-house at 4002 Cedar Springs; frame; 4 suites.

Tex., Dallas.—Edward Kneeland will erect \$15,000 apartment-house at Bishop and Neely Sts.; 20 rooms; brick veneer; 4 suites.

Tex., Houston.—J. F. Curtner will erect \$14,000 apartment-house on Sul Ross Ave.; 2 stories.

Tex., Houston.—William Glover will erect \$10,000 2-story apartment-house on Holman St.

Tex., Waco.—R. T. Dennis will erect \$100,000 apartment-house on Austin Ave.; 117x114 ft.; stucco; 2 stories; Milton W. Scott, Archt.

W. Va., Charleston.—John Jones will erect apartment-house on Delaware Ave. facing Lincoln High School; brick.

W. Va., Charleston.—L. Padlisky will erect brick and concrete apartment building on Donnelly St. nr. Laidley; 39x60 ft.; 20 rooms; cost \$14,000.

### Association and Fraternal.

Fla., Jacksonville.—Edw. DeSaussure Post No. 9, American Legion, will erect \$50,000 building on Ocean St., between Forsythe and

Adams Sts.; 3 stories; 70x84 ft.; tapestry brick and stucco; stone trim; tile roof; French curve windows over wrought iron balconies; Greeley & Benjamin, Archts.

La., Monroe.—Lodge No. 454, B. P. O. E., will erect \$75,000 building on Grand St.; 3 stories; brick; Jacob Bloch, Sig. Masur, Aubrey Haas and others, Building Comm.

N. C., Greensboro.—Building Comm. Y. W. C. A., Mrs. Mary E. Petty, Chrmn., plans to erect building at 314 N. Davie St.; cost about \$125,000; Harry Barton, Archt.; bids received not later than Apr. 16.

Tex., College Station.—A. & M. Masonic Club, S. G. Bailey, Prest., will erect \$150,000 building at the Agricultural and Mechanical College; structure to contain dormitory and clubrooms; stucco finish; 2 stories; T shape; LaRoche & June, Archts., Department of Architecture, Agricultural and Mechanical College.

Tex., San Antonio.—Trades Unions will erect \$125,000 temple; F. S. Ankrom, Archt.

Va., Richmond.—Henrico Lodge No. 130, A. F. & A. M., will erect 3-story building at 22d and M Sts.; 54x100 ft.; brick and steel; Lindner & Phillips, Archts., American Bank Bldg.

### Bank and Office.

Ala., Lafayette.—Dr. Wheeler will erect office building on South Randolph St.

Ala., Mobile.—American Express Co., Ernest Williams, Local Agt., will construct \$12,000 office building on Government St.

Fla., Haines City.—Haines City Bldg. Co. will erect bank and business building; cost about \$50,000; 70x138 ft.; brick or hollow tile; hollow fireproof tile; metal ceilings; ornamental terra-cotta; vaults; archt. not selected. Address R. H. Prine.

Fla., Lakeland.—Chamber of Commerce, A. J. Holworthy, Secy., will erect \$40,000 building on S. Massachusetts Ave.; plans indefinite.

S. C., Columbia.—Corporation of physicians and dentists will organize and erect \$200,000 office building; 40x70 ft.; 7 stories; fireproof; Chas. C. Wilson, Archt.

Va., Gretna.—Peoples Bank of Elba will erect \$15,000 building; 22.5x60 ft.; brick; metal or slag roof; wood, tile and concrete floors; safes; interior tile; steel sash and trim; Heard & Chesterman, Archts., Lynchburg.

W. Va., Petersburg.—Grant County Natl. Bank will erect building; Hersh & Shollar, Archts., Altoona, Pa., will soon call for bids.

### Churches.

Ala., Birmingham.—Owenton Methodist Church will erect \$125,000 building at 8th Ave. and Telulah St.; pressed brick and limestone; J. M. Malone, Treas. Bldg. Comm.

Ala., Gadsden.—Beth Israel Congregation will erect \$25,000 synagogue at Chestnut and 8th Sts.; C. B. Smith, Archt. (Lately noted.)

D. C., Washington.—Milburn, Helster & Co., Washington, D. C., are preparing plans for Presbyterian Church and Sunday-school building at Takoma Park, Md.

Ky., Hazard.—Hazard Star Coal Co. will erect church. (See Dwellings.)

Ky., Marion.—First Baptist Church, Dr. W. P. Meroney, Pastor, W. D. Cannan, Chrmn. Bldg. Comm., will erect \$12,000 addition to building; M. V. Arnold, Archt.

La., Monroe.—First Baptist Church will

erect \$75,000 Sunday-school annex; contain gymnasium, etc.; also increase seating capacity of church auditorium from 800 to 1500; J. W. Smith, Archt.

Md., Baltimore.—Har Zion Congregation will erect \$70,000 synagogue at 2014-16 W. North Ave.; brick and stone; steam heat; Louis Levi, Archt., 1408 Munsey Bldg., opens bids about June 18.

Md., Baltimore.—Frederick Ave. M. E. Church will erect \$30,000 Sunday-school building; 75x52 ft.; brick; slate and composition roof; concrete and pine floors; steam heat; electric lights, rolling partitions; H. L. Cain, Archt., 12 N. 9th St., Richmond, Va., will receive bids until about Apr. 30.

Miss., Meridian.—Poplar Springs Baptist Church will erect building. Address The Pastor.

Miss., Meridian.—Seventh Day Adventist Congregation will erect building at 38th Ave and 7th St. Address The Pastor.

N. C., Fayetteville.—Presbyterian Church will erect Sunday-school building and alter church; brick, wood foundation; slate roof; bids received until Apr. 1 by Hobart B. Upjohn, Archt., 456 Fourth Ave., New York, for general contract, plumbing, heating and electric wiring; plans and specifications from office of same. (Lately noted.)

N. C., Greensboro.—Temple Emanuel, E. Sternsberger, Chrmn. Bldg. Comm., will erect \$75,000 synagogue at Florence and Waiman Sts., Fisher Park; brick and concrete; tile roof; hardwood and concrete floors; steam heat; ornamental terra-cotta; interior tile; Hobart B. Upjohn, Archt., 456 Fourth Ave., New York, will receive bids until Apr. 7 on general contract, plumbing, heating and electric work; plans and specifications ready for distribution Mch. 28. (Lately noted.)

N. C., Winston-Salem.—North Winston Baptist Church, Rev. T. C. Keaton, Pastor, will expend \$30,000 to improve building; extend structure 15 ft. in front and 25 ft. in rear and erect addition on side 32x75 ft.; C. Gilbert Humphreys, Archt.

Okla., Altus.—Baptist Church plans to erect \$29,000 building. Address The Pastor.

Okla., Oklahoma City.—Capitol Hill Baptist Church will erect \$20,000 building. Address The Pastor.

S. C., Anderson.—Second Baptist Church is considering erecting Sunday-school building; W. C. Austin and R. L. Carter interested.

S. C., Georgetown.—Bethesda Baptist Church, Rev. A. W. Puller, Pastor, P. O. Box 455, will receive bids until Apr. 21 to remove present building 20 ft. and erect brick church; 70x90 ft.; 1 story; plans may be seen at 1125 Prince St.

Tex., Georgetown.—Georgetown Baptist Church, Rev. E. Homer Tirey, Pastor, will erect building.

Va., Graham.—Methodist Episcopal Church, Rev. H. B. Brown, Pastor, will erect \$50,000 building.

Va., Norfolk.—Memorial Methodist Church, Rev. S. J. Battin, Pastor, will repair building lately noted damaged by fire at loss of \$20,000. (See Machinery Wanted—Pipe Organ.)

Va., Norfolk.—Mikro-Kodosh Congregation will erect \$50,000 synagogue at Liberty and Brunswick Sts.; brick and stone; 2 stories; 39x78 ft.; B. B. Spigel, Archt., 112 E. Main St.; J. W. Legum, 1218 Liberty St., is interested; bids opened Apr. 1. (Lately noted.)

### City and County.

Md., Baltimore.—Fire Station.—Board of Awards, Wm. F. Broening, Prest., City Hall, will erect No. 40 engine-house at Liberty Heights and Packard Aves.; Frederick

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Thomas, Archt., 135 N. Kenwood Ave. (Lately noted.)

Mo., Cape Girardeau. — Will erect \$30,000 library; Mrs. J. S. Koehitsky, Chrmn. Library Comm.; J. H. Felt & Co., Archts., Kansas City. (Lately noted.)

Mo., Kansas City. — Will erect \$50,000 city hall annex; 2 stories and basement; Fred. C. Gunn, Archt., 1108 Republic Bldg.; bids opened Apr. 12; Michael Walsh, Contr., for excavation and foundation work at \$3087. (Lately noted.)

N. C., Greensboro.—Home.—Gulfport County Commrs. will erect \$150,000 home for the aged and infirm; 1 story; tile; stucco effect; H-shape; accommodate 64; Harry Barton Archt., Okla., Bartlesville.—Convention Hall.—City, A. F. McCaleb, Mayor, will vote Apr. 5 on \$300,000 bonds to purchase site and erect convention hall and community house; R. S. Cox, City Clk. (Lately noted.)

Tenn., Erwin. — Votes April 2 on \$25,000 bonds to erect municipal building. (See Schools.)

Tex., Galveston.—Jail Repairs, etc.—County, John M. Murch, County Auditor, will receive bids until Meh. 28 for repairs, wiring windows, etc., to county jail; plans and specifications on file at office of County Auditor.

Tex., Houston.—Poor Farm.—County, Chester H. Bryan, Judge, will expend \$80,000 on county Poor Farm; Maurice J. Sullivan and Alfred C. Finn, Archts.

Va., Roanoke.—Will erect market-house and auditorium; Mr. Fry, Archt. Address The Mayor. (Previously noted to offer \$100,000 bonds for sale.)

### Courthouses.

Mo., Sedalia.—Pettis County will vote May 7 on \$350,000 bonds to erect courthouse to replace burned structure. Address County Commrs.

N. C., Carthage.—Moore County is considering expending \$15,000 to \$20,000 to remodel courthouse or erect new structure. Address County Commrs.

N. C., Graham.—Alamance County plans to erect \$200,000 courthouse. Address County Commrs.

### Dwellings.

Ala., Birmingham.—John B. Reid Realty Co. will erect 14 dwellings; cost \$3000 to \$3500 each.

Ala., Manchester. — Manchester Coal Co., John Kilgore, Jasper, and others, will erect 20 or more dwellings.

Ark., Camden.—D. C. Snow will erect 3 concrete cottages on Clifton and Spring Sts.

Ark., Dierks.—Dierks Lumber & Coal Co., lately noted to erect 40 to 50 dwellings, will not build this year.

D. C., Washington.—H. R. Howenstein Co., 1314 F St. N. W., will erect 7 two-story dwellings at 3600-12 Park Pl. N. W.; 7 rooms; cost, \$25,000; brick; tin roofs, double pine floors; hot-water heat, \$2800; city lights; plans and construction by owner.

D. C., Washington.—L. E. Breuninger & Son will erect row of dwellings and garages on both sides of Varnum St., near Rock Creek Park; brick.

Fla., Daytona Beach.—J. S. Crooks will erect residence.

Fla., De Land.—Judge James W. Perkins will erect brick-veneer residence on Michigan Ave.; tile roof.

Fla., Jacksonville.—J. S. Halsema, Halsema Lumber Co., will erect frame dwelling on Silver St., between 9th and 10th Sts.

Fla., Jacksonville.—Marsh & Saxelbye are preparing plans for residence.

Fla., Miami.—Maurice A. Mead, Evanston, Ill., is reported to erect residence in Coconut Park Grove.

Fla., Miami.—Wm. H. Auld, Buena Vista, purchased 5 lots in Coconut Grove Park and is having plans prepared by Walter C. De Garmo for 2 residences; Spanish architecture; also plans to erect residence for himself and 1 for parents.

Fla., St. Augustine. — Chas. Leyvraz will erect brick and stucco residence; 32x96 ft.; Spanish tile roof; edge grain pine, hardwood and concrete floors; hot-water heat; electric lights; F. A. Henderich, Archt. (Lately noted.)

Fla., Tampa.—Chas. J. Morrow will erect residence on South Willow St.; Fred. James, Archt.

Ga., Augusta.—A. T. Cole, Prest Cole Mfg. Co., purchased 2000 acres of land near Windsor Springs, about 5 mi. from Augusta and plans to erect \$100,000 residence.

Ga., Augusta.—Maxwell Bros. will erect 12 frame cottages on Starnes St., nr. Eve; total cost \$18,000.

Ky., Hazard.—Hazard Star Coal Co. will erect 50 miners' dwellings, church and school; contract to be let at once.

Ky., Hazard.—Galt Bros. will erect 20 cottages; cost \$1000 each; contract to be let at once.

Ky., Louisville.—Alex. Forrester will erect \$12,000 residence on Bonnycastle Ave.; W. Earle Otis, Archt.

Ky., Louisville.—Mrs. Emma S. Tafel will erect \$22,000 frame dwelling at 1801 Windsor Place.

Ky., Whitesburg.—Big Four Coal Co. will erect 12 miners' dwellings; contract to be let at once.

Ky., Whitesburg.—Sam Hart will erect residence and business building; contract to be let at once.

La., New Orleans.—Standard Housing & Improvement Assn., John Sangassan, Prest., purchased 9 lots on Carrollton Ave., Fig and Short Sts.; will erect bungalows; ultimate plans provide from 100 to 150 in various sections of city.

Md., Baltimore.—J. Irving Bealmear, Fidelity Bldg., will erect 7 dwellings at Prestman and Poplar Grove Sts.; 2 stories; cost \$30,000.

Md., Baltimore.—Mrs. E. M. Noel, 2012 Mt. Royal Ter., will erect 2½-story frame and stucco residence on Edgevale Rd., near Elmwood Ave.; 40.6x40.6 ft.; slate roof; hot-water heat; cost \$10,000; Roy G. Pratt, Archt., Munsey Bldg. (Lately noted.)

Md., Baltimore.—Jos. F. Hirt & Co., 829 N. Luzerne Ave., will erect 13 two-story brick dwellings at 2600-24 Violet Ave.; cost \$18,000.

Mo., Joplin.—Valfu & Co., Harry Valfu, Prest., will erect 5 residences at 4th St. and Connor Ave.; 28x52 ft.; shingle roofs; cost \$5000 each; Chas. Sudhoelter, Archt., taking bids.

Mo., Springfield.—Burton Building & Investment Co., 209 Holland Bldg., will erect 9 dwellings in Sanford Place addition; hollow tile and stucco, brick and frame; composition roofs; hardwood floors; hot-air and hot-water heat; hollow fireproof tile; ornamental terra-cotta; safes; H. Ross Johnston, Archt., 201 Holland Bldg.; construction by owner. (Lately noted.)

Mo., St. Louis.—Wiblin Constr. Co. will erect three 6-room bungalows on Abner Pl., near Ashland Ave.

N. C., Charlotte.—T. C. Wilson will erect \$10,000 to \$12,000 residence on Monroe Rd.

N. C., Charlotte.—J. M. Matthews will erect 2-story residence.

N. C., Charlotte.—Myers Park Home Co. will erect residence at Worthington and Kingston Ave.

N. C., Charlotte.—Chas. G. Holler will erect residence on Statesville Ave.

N. C., Charlotte.—Flake Reid will erect \$10,000 to \$12,000 residence on Monroe Rd.

N. C., Greensboro.—Paul G. Welch will erect residence.

N. C., Lexington.—James Adderton will erect brick residence; W. C. Northup, Archt., Winston-Salem.

N. C., Lexington.—A. E. Sheets will erect colonial residence; W. C. Northup, Archt., Winston-Salem.

N. C., Raleigh.—A. F. Guirken organized building company with capital stock of \$100,000; plans to erect number of dwellings.

N. C., Roanoke Rapids.—S. F. Patterson is erecting 2½-story residence previously noted; brick; slate roof; hardwood floors; vapor heat; safes; Hobart B. Upjohn, Archt., 456 Fourth Ave., New York, receives bids until Apr. 1 on electric work. (See Machinery Wanted—Electrical Equipment.)

Okla., Mangum.—First Baptist Church will erect brick parsonage. Address The Pastor.

S. C., Greenville.—Ernest Freeman will erect \$15,000 residence on Townes St.

S. C., Greenville.—J. D. Bridges will erect \$12,000 brick veneer residence on Rutherford St.

Tenn., Bristol.—Bristol Housing Corp. plans to erect number of dwellings; will construct 6 at a time.

Tenn., Memphis.—Mrs. D. H. Hamilton will erect residence and garage; John K. Turton Co., 101 Park Ave., New York, is figuring on general contract and requests bids on various materials. (See Machinery Wanted—Building Material; Structural Steel; Ornamental Iron; Millwork; Roofing and Sheet Metal Work; Painting; Electric Work; Brick; Terra-Cotta; Cement; Timber; Plumbing.)

Tenn., Paris.—John W. Wiggs purchased lot on South Dunlap St. and plans to erect residence.

Tex., Dallas.—J. R. Swain will erect \$12,000 residence at 2720-22 Routh St.; 2 stories; brick veneer; 10 rooms.

Tex., Dallas.—A. S. Childers will erect 11 five-room frame cottages; cost \$26,550.

Tex., Fort Worth.—Dr. C. A. Ward will erect \$13,000 residence at 2201 Edwin St.; 9 rooms; brick.

Tex., Fort Worth.—N. R. Randol will erect \$11,000 residence at 1215 Clara St.; 7 rooms; brick and tile.

Tex., Fort Worth.—T. B. Huffman will erect \$15,000 residence at 2225 Lipscomb St.; 7 rooms; stone.

Tex., San Antonio.—Frank Huntress will erect 2-story hollow-tile residence; Herbert S. Green, Alamo Bank Bldg.

Tex., San Antonio.—W. A. Sonner will erect six 5-room dwellings; cost \$13,400.

W. Va., Charleston.—Frank M. Powell will erect \$12,000 residence at 155 Stanley Ave., Poff Plaza; 2 stories; 8 rooms; tile and stucco.

W. Va., Charleston.—J. E. Campbell will erect 3 dwellings on Dixie St., between Ruffner and Thompson Sts.; 2 stories; 6 rooms; brick; cost \$5000 each.

W. Va., Charleston.—W. M. Gillie will erect 4 dwellings on W. 2nd St., between Glenwood and Burlew; 2 stories; 5 rooms; frame; total cost about \$10,000.

W. Va., Charleston.—Elvin Jarrett will erect 10-room 2-story bungalow on rear of residence; contain 2 apartments.



W. Va., Huntington.—John F. Ferrell will erect 10 bungalows on 9th St. W., between Madison and Monroe Aves.; cost \$30,000.

W. Va., Fairmont.—Fairmont & Cleveland Coal Co. will erect 25 miners' dwellings.

### Government and State.

Tex., Corpus Christi.—Hospital.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., will repair and alter Public Health Service Hospital; H. W. Bond & Bro., 1019 Constantinople St., New Orleans, La., lowest bidders at \$24,705. (Lately noted.)

### Hospitals, Sanitariums, Etc.

Md., Baltimore.—City will erect hospital for which \$750,000 loan was voted; E. H. Glidden, Archt., American Bldg.; Dr. Winford H. Smith, Johns Hopkins Hospital, Chrmn. Hospital Comsn. (Lately noted.)

N. C., Asheville.—Mission Hospital will erect wing; 5 stories; 118x40 ft.; fireproof; brick; cost \$200,000 to \$250,000.

N. C., Greensboro.—St. Leo's Hospital will erect \$130,000 nurses' home; brick; 50 or more rooms.

N. C., Rocky Mount.—Atlantic Coast Line R. R., J. E. Willoughby, Ch. Engr., Wilmington, reported to erect hospital to replace burned structure.

Okla., Bartlesville.—City, Ralph S. Cox, Clk., receives bids until Apr. 2 to erect hospital, West of Delaware Ave., between 2nd and 3rd Sts.; Walton Everman, Archt.; plans and specifications at office of Mr. Cox. (Lately noted.)

### Hotels.

Fla., Pablo Beach.—B. A. Murphy, Atlantic Beach, plans to erect \$100,000 hotel, First St. and Pablo Ave.; 4 stories; concrete.

Fla., Pensacola.—Robt. Dalton, Dalton House, Daytona, purchased 287-acre site on Ball Bluff and will develop for resort; reported to erect \$500,000 hotel; build bathing casino, golf links, etc.

Fla., Williston.—L. C. Hester, Williston Mfg. Co., is reported to erect 40-room hotel.

Fla., West Palm Beach.—South Florida Hotel Corp., Chas. Kennedy, Prest., will erect 200-room hotel at Banyan St. and Flagler Drive; 8 stories; lower floor for stores; cost \$300,000. (Lately noted.)

Mo., Kansas City.—Leonard A. Dartley will erect 4-story hotel and kitchenette at 13th and Paseo Sts.; site 52x130 ft.

Mo., Springfield.—John Landers will erect addition to Colonial Hotel.

Tex., Graham.—Graham Hotel Corp., J. J. Gallagher, Prest.; C. A. Bryant, Secy.; plans to erect 5-story hotel; 170 rooms; elevator; roof garden; semi-fireproof; brick and steel; tile for courts; concrete, wood and lumber; cost, with furniture, about \$225,000. (See Machinery Wanted—Building Material.)

Va., Harrisonburg.—Stuart H. Edmonds, 45 W. Water St., Winchester, is preparing plans for 7-story hotel; fireproof; brick and steel.

W. Va., Morgantown.—Chamber of Commerce, in conjunction with Rotary and Kiwanis clubs and Morgantown Coal Operators' Assn., is promoting erection of \$700,000 hotel; 150 rooms; plans to sell \$400,000 in bonds and arrange for placing additional \$300,000.

### Miscellaneous.

Fla., Jacksonville.—Stable.—Bryson Livestock Co. will erect \$10,000 addition to stable at Duval and Church Sts.

Fla., Ocala.—Restaurant.—Temple & Davidson will erect restaurant.

Fla., Tampa.—Clubhouse.—Woman's Club, Mrs. T. M. Shackleford, Prest., plans to erect clubhouse.

Ga., Athens.—Cafeteria.—A. C. Thornton will remodel cafeteria in Holman Building.

Ga., Thunderbolt.—Clubhouse.—Savannah Yacht Club, Jos. L. Barr, Commodore, will erect clubhouse.

Ky., Lyndon.—Home.—Kentucky Children's Society, Geo. L. Schon, Chrmn., 217 E. Gray St., Louisville, will erect home, to include administration building, 8 cottages, school, chapel, hospital and power-house; cost \$300,000; 3 stories and basement; brick; Nevin, & Wischmeyer, Archts., 1317 Starks Bldg., Louisville. (Lately noted.)

La., New Orleans.—Restaurant.—Fuerst & Kraemer, Ltd., will remodel Crescent Hall at Canal and St. Charles Sts. for restaurant; 74x115 ft.; provide mezzanine floor, etc.

Mo., Springfield.—Clubhouse, Dam, Lake, Etc.—Fin and Feather Club, Chas. E. Gardner, Prest., will erect \$5000 clubhouse, construct 1500-ft. earthen and concrete dam, and create 40-ft. lake. (Lately noted.)

Okla., Holdenville.—Convention Hall, etc.—Chamber of Commerce is promoting erection of armory and convention hall.

S. C., Abbeville.—Community House.—Abbeville Cotton Mills will erect community house; W. L. Hemphill, Archt. (Lately noted to erect pergola, bandstand, etc., in connection with park.)

Tenn., Memphis.—Clubhouse.—Nineteenth Century Club will remodel interior of building, increase size of swimming pool and line with tile, install equipment, including filtration system, heating, etc. Address Mann & Gatling, Archts., 614-618 Seimtar Bldg. (See Machinery Wanted—Swimming-pool Equipment; Filtration System; Heating System; Lockers; Tile; Spring Board.)

Tex., Dallas.—Stadium.—State Fair Assn., Willey Blair, Chrmn. of Comm., will erect \$30,000 athletic stadium; frame; seat 16,000.

Tex., Fort Worth.—Rink.—Fort Worth Amusement Co. will construct roller rink at 708-18 Daggett St.

Tex., Seguin.—Clubhouse.—Country Club will erect \$20,000 clubhouse. Address H. H. Weinert, Seguin State Natl. Bank.

Va., Leesburg.—Library.—Thos. Black will erect \$25,000 colonial library; 1 story; 74x20 ft.; brick; stone trim; Waddy B. Wood, Archt., 816 Connecticut Ave. N. W., Washington, D. C.

Va., Richmond.—Fair.—Virginia State Fair, W. C. Saunders, Gen. Mgr., will erect cattle barns; cost \$200,000.

W. Va., Wheeling.—Mausoleum.—West Virginia Mausoleum Co., Jas. K. Hall, Mgr., is considering erecting mausoleum in Greenwood Cemetery.

### Railway Stations, Sheds, Etc.

Va., Perrow's Siding.—Virginian Ry., H. Fernstrom, Ch. Engr., Norfolk, will erect passenger and freight station at Perrow's Siding, near Lynchburg.

W. Va., Fairmont.—Monongahela Valley Traction Co. will not erect station as lately reported.

### Schools.

Ala., Montgomery.—Montgomery County will vote on \$500,000 bonds to erect school building. Address County Commrs.

Fla., Arlington.—Duval County Board of Public Instruction, Dr. Fons A. Hathaway, Supt. of Schools, Jacksonville, will erect

\$30,000 school; 1 story; 84x134 ft.; brick; tile or slate-covered shingle roof; yellow-pine floors; steam heat; Mark & Sheftall, Archts., 210 Clark Bldg., Jacksonville. (Lately noted.)

Fla., Bonita Springs.—Lee County Board of Public Instruction, B. E. Tinstman, Chrmn., Fort Myers, will receive bids until Apr. 14 to erect school in Special Tax Dist. No. 7; plans and specifications from office Francis J. Kennard, Archt., Tampa, and on file with J. D. McFerron, Supt. and Treas. to Board, Fort Myers. (Lately noted to open bids Mch. 14.)

Fla., Haines City.—City voted bonds to erect senior high school. Address Board of Education.

Fla., Pensacola.—Escambia County Board of Public Instruction, A. S. Edwards, Supt., will receive bids until Apr. 16 to erect 9-room 2-story brick school; plans and specifications at office Walker D. Willis, Archt., 617 Blount Bldg. (Previously noted.)

Fla., Vero.—Special Tax School Dist. No. 11 will vote April 12 on \$30,000 bonds to enlarge building. Address Dist. School Trustees.

Ga., College Park.—City, W. W. Bateman, Mayor, votes Apr. 23 on \$50,000 school, \$10,000 sewer and \$10,000 paving bonds. (Lately noted.)

Ga., Columbus.—School Board will call new bids on following schools: North Highlands, T. W. & E. O. Smith, Archts.; Linwood, Chas. F. Hickman and John T. Martin, Jr., Archts.; Sixth Avenue, F. Roy Duncan, Archt. (\$150,000 bonds lately noted authorized.)

Ga., Hardwell.—Board of Education will erect \$40,000 high school; Jas. J. Baldwin, Archt., Anderson, S. C.

Ga., Macon.—Greater Mercer University, Dr. Rufus W. Weaver, Prest., contemplates expending \$2,500,000 for structures, to include home for president, main dining hall, science and law buildings, gymnasium, dormitories, 175-ft. tower; also remodel present buildings; Edw. L. Tilton, Archt., 52 Vanderbilt Ave., New York. (Previously noted.)

Ky., Hazard.—Hazard Star Coal Co. will erect school. (See Dwellings.)

La., Scotland.—Board of Administrators of Louisiana State School for Colored Blind will receive bids until Apr. 4 to erect 1-story school; cost \$70,000; plans and specifications at office Favrot & Livaudais, Archts., Title Guarantee Bldg., New Orleans. (Lately noted.)

Md., Baltimore.—Public Improvement Commission, Robt. Garrett, Prest., Garrett Bldg., is having plans revised for Montebello School; Clyde N. Friz, Archt., Lexington Bldg. (Previously noted.)

Miss., Jackson.—Board of Education, Edw. L. Bailey, Supt., will erect white elementary school on W. Capitol St.; also negro elementary school; architects invited to submit plans Apr. 4. (Lately noted to issue \$70,000 bonds to improve and repair schools.)

Mo., Cape Girardeau.—Cape Girardeau School Dist., Geo. L. Myer, Treas., will erect May Greene School and addition to Central High School; J. H. Felt & Co., Archts., Kansas City, will supervise construction. (Lately noted to sell \$54,000 bonds.)

Mo., Columbia.—University of Missouri, J. G. Babb, Secy., will erect 3-story agricultural and 2-story mechanic arts buildings; fireproof; brick and stone; cost \$200,000 and \$100,000, respectively.

Mo., Grandview.—Board of Education, Dist. No. 64, will receive bids until Mch. 31 at office Hawkins & Hoener, Archts., 400 McDaniel Bldg., Springfield, to erect brick school; plans and specifications at office of

architects. (Lately noted to have voted \$75,000 bonds.)

Mo., Waco.—School Directors, E. J. Smith, Secy., will erect \$10,000 building.

Mo., Willard.—Board of Education will erect \$20,000 school for Willard Consolidated School Dist.; 52x88 ft.; brick and wood; pitch shingle roof; wood floors; hot-air or steam heat; electric lights; opens bids about April 15; Geo. F. Reed, Archt., Springfield. (Lately noted.)

N. C., Carthage.—Carthage School Dist. will vote on \$100,000 bond issue for schools. Address County Board of Education.

N. C., Durham.—City Board of Education will erect 3 schools to cost \$600,000; Milburn, Heister & Co., Archts., Union Savings Bank Bldg., Washington, D. C., and Durham, will supervise construction; W. B. Ittner, Consol. Archt., Board of Education Bldg., St. Louis.

N. C., Lacey (R. D. from Hennessey).—Lacey Consolidated School Dist. Trustees will erect school; will vote on bonds.

N. C., Reidsville.—Board of Education will receive bids until Apr. 6 to erect high school and auditorium; W. C. Northup, Archt., Winston-Salem. (Previously noted.)

N. C., Welcome.—Davidson County Board of Education, Lexington, will consolidate Welcome, Arnold, Ebenezer and Wagner districts, which voted special tax to erect elementary and high school. (Lately noted.)

Okla., Fairfax.—City voted \$50,000 bonds to erect high school gymnasium and auditorium; C. P. Howell, Supt. of Schools. (Lately noted.)

N. C., Wadesboro.—School Board, F. M. Williamson, Member, will erect \$90,000 school; lately noted; 156x60 ft.; brick and hollow fireproof tile; interior tile; ornamental terracotta; Barrett roof; hardwood and concrete floors; rolling partitions; ventilators; hot-air heat; bids opened about May 15; W. J. Wilkins & Co., Archts., Florence, S. C. (See Machinery Wanted—Gymnasium Supplies.)

Okla., Caddo.—School Board will erect high school to replace burned structure; \$30,000 bonds voted. (Lately noted.)

S. C., Cowards.—Board of Trustees, Z. C. Lynch, Chrmn., will erect \$22,000 high school; 12 class rooms and auditorium; brick and frame; built-up roof; wood floors; steam heat, \$4000; independent electric lighting plant; plans ready about Apr. 5 and bids opened Apr. 15. Address W. D. Harper, Archt., Florence, S. C., or Mr. Lynch.

S. C., York.—Yorkville School Dist. No. 11, Thos. F. McDow, Chrmn. Bd. of Trustees, will erect school; brick; Edwards & Sayward, Archts., Atlanta, Ga. (Lately noted to vote on \$125,000 bonds.)

Tenn., Erwin.—City votes April 2 on \$35,000 bond issue to erect and equip school and pay \$5000 debt on present building; \$25,000 bonds for sewers and \$25,000 bonds for municipal building. Address The Mayor.

Tex., Austin.—St. Edward's College, Rev. Dr. Matthew Schumacher, C. S. C., Prest., contemplates \$500,000 group of buildings; remodel present college building for educational building; renovate and enlarge nuns' residence for dormitory, improve and erect addition to gymnasium and natatorium; erect chapel, nuns' residence with infirmary, laundry, mess hall, kitchen, etc.; A. W. Harris, Archt.

Tex., Collinsworth.—W. Cooley, V.-P., City Natl. Bank, El Paso, will erect 4-room school at Collinsworth; bungalow type; O. H. Thorman, Archt., El Paso.

Tex., Dalhart.—Dalhart Independent School Dist., Roy W. Thompson, Prest. Bd. of Education, will erect \$100,000 high school.

Tex., Del Rio.—School Dist. voted \$120,000 bonds issue to erect \$75,000 school building and retire \$30,000 of outstanding bonds. Address Board of Education.

Tex., Saltillo.—Herbert S. Green, Alamo Bank Bldg., San Antonio, Tex., and Aparado 250, Saltillo, prepared plans for \$500,000 university; construction by administration; no contract; all material purchased through Mr. Green. (See Machinery Wanted—Building Material; Catalogs, etc.)

Tex., El Paso.—County Board of Education, Myra C. Winkler, Supt., will erect 4-room school at Smelter.

Tex., Lewisville.—School Board will erect building.

Tex., Stamford.—City, Homer D. Wade, Mgr., will erect high school.

Va., Chatham.—Chatham Training School plans to erect \$50,000 addition.

Va., Charlottesville.—University of Virginia, W. M. Thornton, Dean, will erect \$175,000 engineering building; accommodate 600 students; fireproof; reinforced concrete piers, floors and roof; plans by Prof. Fiske Kimball of School of Architecture at college.

Va., Hamilton.—Mt. Gilead Dist., O. L. Emerick, Supt. of Schools of Loudoun County, Purcellville, will erect school; 1 story; brick; 4 rooms; Stuart H. Edmonds, Archt., 45 W. Water St., Winchester.

Va., Pearisburg.—District School Board plans to erect Smith-Hughes high school; cost \$15,000.

Va., Purcellville.—Loudoun County School Board, O. L. Emerick, Supt., will erect school; 2 stories; brick; 8 rooms; Stuart H. Edmonds, Archt., 45 W. Water St., Winchester.

Va., Winchester.—Frederick County School Board will erect school; Stuart H. Edmonds, Archt., 45 W. Water St.

W. Va., Bridgeport.—Simpson and Bridgeport Independent School Dist. voted bonds to erect joint high-school building; cost \$102,000; brick; stone trim; semi-fireproof; 2 stories and basement; 14 classrooms and laboratories; auditorium to seat 600; gymnasium, manual training and agricultural departments in basement; S. W. Ford, Archt., Lafayette Bldg., Clarksburg. (Lately noted.)

W. Va., Princeton.—City plans election on \$150,000 bonds to erect 2-story high school; W. McCutcheon, Prin.

## Stores.

Fla., Jacksonville.—Southern Drug Mfg. Co. will erect \$175,000 building; 2 stories and basement; 105x315 ft.; reinforced steel and concrete; tar and gravel roof; concrete floors. Address M. Leo Elliott, Archt., Tampa. (Lately noted.)

Fla., Ocala.—J. D. Robinson will erect building at Main and Oklahoma Aves.

Ga., Columbus.—Sol Loeb Estate will improve stores on block between 12th and 13th Sts.; T. W. & E. O. Smith, Archts.

Ga., Columbus.—Jas. A. Lewis will erect 3-story brick building on 12th St.; F. Roy Duncan, Archt.

Ky., Catlettsburg.—J. M. York will rebuild store building; 3 stories and basement; 30x100 ft.; brick and limestone; Tyson & Foster, Archts., Woods Bldg., Ashland.

Ky., Russell.—Dr. C. S. Vidy will erect store; 1 story and basement; 38x130 ft.; frame; Tyson & Foster, Archts., Woods Bldg., Ashland.

N. C., Greensboro.—North State Culvert Co., J. H. Slaughter, Prest., 217 Lewis St., will erect steel building at 219 Lewis St.; 40x100 ft.

Okla., Kingfisher.—Logan & Ames Dry

Goods Co. will expend \$15,000 to remodel store on Main St.

S. C., Columbia.—R. L. Bryan Co. will extend and improve brick building at 1440 Main St.

S. C., Columbia.—J. L. Tapp will erect store and apartment building at 1020 Gervais St.

S. C., Florence.—Lucas & Van Anken will remodel Rutledge Building on W. Evans St.

Tenn., Paris.—B. Frank Hunter will erect building for grocery store; iron and glass front; finished with buff-colored face brick.

Tex., Cleveland.—L. A. Isaacks will erect business building on Main St.; concrete.

Tex., Dallas.—J. C. Hooper and Alex Camp will construct brick and concrete building at Pearl and Canton Sts.; 90x100 ft.; cost \$28,000.

Tex., Dallas.—W. A. Tufaner will erect 1-story brick store, 1406 Bryan St.; cost \$10,000.

Tex., Houston.—Richard Rogers will erect 2-story brick store and office building at Caroline St. and Capitol Ave.; cost \$38,600.

Tex., Waco.—Miller Produce Co., Inc., P. O. Box 1001, will erect building lately noted; 50x75 ft.; brick; tar and gravel roof; 2x6-in. pine floors; vaults; bids opened in about 2 weeks; Brich D. Easterwood, Archt., 404 Praetorian Bldg. Address owner. (See Machinery Wanted—Cold-storage Plant.)

Va., Potomac.—Hugo Huerfurth, Jr., Asaph and Madison Sts., Alexandria, will erect \$10,000 store and apartment building; 2 stories; 27x50 ft.; brick; W. Leon Clark, Archt., 917 Prince St., Alexandria; construction by owner.

W. Va., Charleston.—Jos. and John Kourney will erect store and apartment building at 1230 Washington St.; 2 stories; brick and wood; 50x75 ft.; 23 rooms; 4 apartments; cost \$25,000.

W. Va., Charleston.—A. J. Humphreys will erect business block at Charleston St. and Delaware Ave.; upper floors, apartments.

## Theaters.

D. C., Washington.—J. S. Leatherman will have plans revised and increase size of Seventh Street Theater; Milburn, Heister & Co., Archts., Union Savings Bank Bldg. (Lately noted.)

Fla., Daytona.—H. H. Titus will erect \$75,000 moving-picture theater; Spanish architecture; 50x110 ft.; seat 700 on ground floor, 500 in balcony; Mark & Sheftall, Archts., Jacksonville; W. A. Hall, Contr., Daytona. (Previously noted.)

Mo., St. Louis.—M. J. Walsh and associates will erect \$80,000 motion-picture theater on Manchester and Arco Aves., Tower Grove Section; seating capacity 1700.

Mo., Wellston (Sta. St. Louis).—Wellston Theater Co. inceptd. by Fred. Robinson and William. John and Robt. Smith, and will erect \$85,000 theater on Easton Ave.

N. C., Tarboro.—Building and Grounds Committee is having tentative plans prepared by Renton & Renton, Wilson, for remodeling Tarboro Opera House; improve entrance, install steam heat, provide horseshoe balcony, extend and change stage; cost about \$15,000.

S. C., Columbia.—Columbia Theater Co., L. T. Lester, Jr., Prest., will erect theater.

Va., Portsmouth.—Hofheimer & Rohr will erect theater; bids opened; Calrow, Wrenn & Tazewell, Archts., Norfolk.

## Warehouses.

Ala., Opelika.—John V. Denson, J. A. Walker, and others are promoting company to erect sweet-potato warehouse.

Fla., Tampa.—J. R. Mickler will erect warehouse at Grand Central and N. Rome Aves.; 1 story; brick; concrete floors; cost \$15,000; M. Leo Elliott, Archt.

Mo., St. Louis.—Rosenthal Paper Co., 2d St. and Lucas Ave., is reported to erect \$300,000 building at 2d and Poplar Sts.

Okla., Okmulgee.—Bonded Warehouse Co. will erect warehouse; 5 stories; 107x109 ft.; brick and stone; reinforced concrete floors; cost \$70,000 to \$75,000; Smith, Rea, Lovitt & Senter, Archts., Parkinson Bldg.

Okla., Tulsa.—Industrial Construction Co., Ernest H. Cornelius, Prest., 411 Central Natl. Bank Bldg., will erect warehouse.

Tex., Galveston.—Cotton Concentration Co., Geo. Sealy, Prest., will erect 2 cotton-enclosed receiving sheds at Pier 35 to replace burned structures; 600x120 ft.; paper and shell roof; hollow fireproof tile; metal doors; combined capacity 25,000 bales; M. C. Bowden, Archt. (Lately noted.)

Tex., Yoakum.—Geo. F. Wilson & Co. will erect \$18,000 warehouse; 75x100 ft.; fireproof; L. Harrington & Co., Archts. and Engrs., San Antonio.

Va., Norfolk.—Virginia-Carolina Supply Co., 50 Commerce St., will erect storage warehouse; 1 story; frame.

addition 50x125 ft.; private baths; fireproof; reinforced concrete; 5 store rooms on first floor; mezzanine floor for offices; remodel and enlarge rotunda of present structure; cost \$300,000; G. Lloyd Preacher & Co., Archts., Atlanta and Augusta; Griffin Constr. Co., Contr., Atlanta.

### Miscellaneous.

Ky., Louisville.—Jewish Welfare Federation will remodel and erect addition to children's home, 1151 S. 1st St.; cost \$25,000; Platoff & Bush, Contrs.

Ky., Louisville.—Exhibit Building.—Kentucky State Fair Assn., 602 Republic Bldg., will erect \$250,000 Agriculture, Merchants' and Manufacturers' Building; 366x403 ft.; reinforced concrete; concrete floors; Joseph & Joseph, Archts.; C. A. Koerner & Co., Contrs. (Lately noted.)

Tex., Dallas.—Exhibit Building.—Dallas Automobile Show, Henry B. Parks, Mgr., will erect \$40,000 auto-exhibit building; W. C. Hedrick Construction Co., Contr.

Va., Richmond.—Clubhouse.—Lakeside Country Club, A. L. Straus, Chrmn. Bldg. Comm., will expend \$22,000 to alter clubhouse; Barnham & Hoffman, Archts., Chamber of Commerce Bldg.; W. L. Ragland & Son, Contrs., Merchants Bank Bldg. (Previously noted.)

Va., Richmond.—Clubhouse, etc.—W. B. Bradley, 12 N. 9th St., will erect \$12,000 clubhouse on Mayo's Island; 2 stories; also construct baseball park; \$20,000; H. Carl Messerschmidt, Archt., Mutual Bldg.; E. L. Bass & Bros., Contrs., 7th and Bainbridge Sts. (Lately noted in part.)

### Schools.

Md., Prince Frederick.—Calvert County Board of Education, Geo. D. Turner, Chrmn. Bldg. Comm., will erect \$35,000 high school; 33x63 ft. and 20x62 ft.; frame; tin roof; oak floors; heating and lighting undecided; Walter M. Geiske, Archt., Gunther Bldg., Baltimore; Lyons & Gibson, Contrs., Huntington, Md. (Previously noted.)

Miss., Belzoni.—School Board will erect \$62,000 grammar school; R. H. Hunt, Archt., Chattanooga, Tenn.; T. L. Reed & Son, Contrs., Belzoni. (Lately noted.)

N. C., Durham.—Trinity College, Dr. Few, Prest., will erect Southgate Memorial dormitory for women; fireproof; accommodate 136; cost \$200,000; first of several structures; Thos. W. Soers, Landscape Archt., Phila.; S. E. Furgeson Co., Contr., New York.

N. C., East Spencer.—School Board, C. H. Silles, Chrmn., will erect \$41,000 school building; 60x104 ft.; 2 stories; brick; composition roof; pine floors; concrete basement; low pressure steam heat; city lighting; Chas. C. Hook, Archt., Charlotte. Address T. C. Abbott & Son, Contrs., Salisbury. (Lately noted.)

N. C., Winston-Salem.—Board of Education will erect Cobb memorial school and auditorium at Locas Hill; 1 story; R. L. Shoaf, Contr., Lexington.

Tex., San Antonio.—Sisters of Charity of Incarnate Word will erect \$400,000 fireproof building on River Ave.; concrete, faced with brick; 5 stories; F. B. Goenslen, Archt.; H. N. Jones Constr. Co., Contr.; Chalkley Bros., heating; Graham & Collins, electrical work. (Previously noted.)

Va., Norfolk.—City School Board, Richard A. Doble, Div. Supt., Bankers' Trust Bldg., let contract to Kemp-Billups Co. at \$22,500 for heating and plumbing in James Madison School annex, for which Baker & Brinkley have general contract; 12 rooms; brick; wood floors; cost \$70,000; Neff & Thompson, Archts., Seaboard Bank Bldg. (Lately noted.)

## BUILDING CONTRACTS AWARDED

### Apartment-Houses.

Ala., Mobile.—W. F. Clark and W. McDonald will erect \$175,000 apartment-house; 99x77 ft.; 2 stories; reinforced concrete frame, hollow tile and brick walls; composition roof; concrete, marble, tile and oak floors; hollow fireproof tile; interior tile; metal doors; mail chutes; ventilators; Dunham vapor-steam heat; city lighting; electric traction elevator; C. L. Hutchinson, Archt.; Beard-Durham Constr. Co., Contr. (Lately noted.)

La., New Orleans.—Louisiana Apartment-house Corp. will erect \$14,000 apartment-house at Broadway and Cohn St.; 26x56 ft.; frame and magnesite stucco; blue slate roof; pine floors; Clow gas-steam radiator heating plant; A. L. Smith, Archt.-Contr., 228 S. Hennessy St. (Lately noted.)

### Association and Fraternal.

Fla., Jacksonville.—Grand Lodge Knights of Pythias will erect \$100,000 building on Ashley St., between Madison and Jefferson Sts.; 5 stories; 53x195 ft. with L. 40x50 ft.; brick; several stories on first floor; lodge rooms above; P. J. McCullough, Archt. and Contr., Bisbee Bldg.

### Bank and Office.

Md., Baltimore.—United States Fidelity & Guaranty Co. will erect 7-story annex to 12-story building at Calvert and Mercer Sts. instead of 4 stories as originally planned; 40x115 ft.; steel frame; reinforced concrete; slag roof; concrete and mastic floors; steam heat; electric elevators; hollow fireproof and interior tile; metal doors; wire glass; mail chutes; vault lights; ventilators; cost about \$500,000; Wyatt & Nolting, Archts., Keyser Bldg., Baltimore; Geo. Dose Engineering Co., Inc., Contr., 43 W. 27th St., New York. (Previously noted.)

### Churches.

Ala., Opelika.—Baptist Church, Rev. Dr. J. W. Mayfield, Pastor, will erect \$22,000 building; W. J. Padgett, Contr. (Lately noted.)

Fla., Tampa.—E. L. Bethel Primitive Baptist Church will erect \$17,500 building at 509-11 Michigan Ave.; pressed brick; concrete floors; composition shingle roof; B. C. Bonfoey, Archt.; Logan Bros., Contrs.

Ga., Savannah.—Catholic Church of the Blessed Sacrament, Rev. Daniel J. McCarthy, Pastor, will erect building at 44th and Waters Aves.; Colonial design; seat 200; W. T. Hussey, Supt. of construction.

S. C., Lockhart.—Baptist Church, Rev. C. C. Matheny, Pastor, will erect \$28,500 building; brick; tin roof; pine floors; electric lights; Casey & Fant, Archts., Anderson; J. A. Gaines, Contr., Tryon, N. C. (Lately noted.)

Tex., Santa Anna.—Baptist Church, Rev. J.

M. Reynolds, Pastor, will erect \$40,000 building; 60x110 ft.; brick and reinforced concrete; slate roof; hardwood and cement floors; natural-gas heat; gas and electric lighting; C. W. Bulger & Son, Archts., Dallas; Moore Construction Co., Contr., Brownwood.

### City and County.

Md., Baltimore.—Library.—Enoch Pratt Free Library, Dr. Bernard C. Steiner, Librarian, Mulberry St., near Cathedral, will erect branch library at 10 S. Central Ave.; cost \$40,823; 300 sq. ft. area; brick; wood floors; slate roof; steam heat, \$4000; electric lights. \$1125; Archer & Allen, Archts., Central Savings Bank; Hicks, Tase & Norris, Contrs., 106 W. Madison St.

Okla., Poteau.—LeFlore County Commrs. will erect \$20,000 jail; 2 stories; brick and concrete; J. W. Gray, Contr., Howe. (Lately noted.)

### Dwellings.

Fla., Jacksonville.—E. A. Groover will erect \$15,000 residence in Avondale; R. B. Parramore, Contr.

Fla., Jacksonville.—J. R. Sherman, Mgr. Antietam Paper Co., will erect \$10,000 residence, Avondale; 2 stories; frame; 2 porches; P. J. McCullough, Archt.-Contr.

Fla., Jacksonville.—J. E. Rwanowski, 204 E. Bay St., will erect \$25,000 residence on Riverside Ave. between Stockton and Barrs Sts.; brick; 2 stories; 76x52 ft.; C. E. Holton, Contr. (Lately noted.)

Md., Baltimore.—Dr. Wyatt W. Randall, 16 W. Saratoga St., will erect \$10,000 residence on Ruby Rd., nr. Overhill Rd.; 2½ stories; frame; 23x48 ft.; Wm. W. Emmart, Archt., Union Trust Bldg.; G. Walter Tovell, Contr., Eutaw and McCullough Sts. (Lately noted.)

Tex., Corsicana.—P. Samuels will erect \$12,000 two-story residence at W. 4th Ave. and N. 18th St.; H. O. Blanding, Archt.; A. E. Haslam, Contr.

Tex., Corsicana.—P. Samuels will erect \$12,000 residence at N. 18th St. and W. 4th Ave.; 2 stories; H. O. Blanding, Archt.; A. E. Haslam, Contr.

### Hotels.

Fla., Miami.—Samuel Magid will erect 50-room hotel on Collins Ave.; 3 stories; cost \$35,000; Wensch & Engman, Contrs. (Lately noted.)

Fla., Vero.—Geo. W. Gray will erect \$15,000 hotel, lately noted; 21 rooms with private bath; 56x90 ft.; frame and stucco; slate roof; wood floors; electric lights; L. M. Newman, Archt. and Contr. (See Machinery Wanted—Furniture; Rugs.)

Ga., Atlanta.—Jno. A. Manget will remodel and erect 200-room addition to Cecil Hotel;



W. Va., Itman.—Slab Fork School Dist., H. F. Hartley, Prest., Maben, will erect \$50,000 grade school; 2 stories; 70x90 ft.; A. F. Wyson, Archt., Princeton; A. L. McDaniel, Contr., Box 233, Bluefield. (Lately noted.)

### Stores.

Ark., Bentonville.—J. W. Berry will erect \$12,000 building for grocery store and offices; 52x100 ft.; brick walls; fireproof roof; concrete and hardwood floors; metal ceilings; metal doors; wire glass; ventilators; steel sash and trim; steam heat, \$2000; electric lights; T. W. Nelson, Archt. and Contr. (Lately noted.)

D. C., Washington.—Allan E. Walker and Wm. L. Browning will erect 6 stores, 24-15-25 14th St., N. W.; cost 30,000; 19x57 ft. each; brick, frame and hollow fireproof tile; slag roof; terrazzo floors; metal ceilings; hot-water heat, \$2500; R. F. Borosford, Archt.; T. L. Lewis, Contr., 1819 19th St.

Fla., Jacksonville.—O. R. Anderson will erect \$10,000 building on St. Johns Ave. and Hoeko-

day St.; 2 stores on first floor; apartments above; P. J. McCullough, Archt.-Contr.

Fla., Jacksonville.—Seaboard Air Line R. R., W. D. Faucette, Ch. Engr., Norfolk, Va., will erect 2-story brick building on Bay St., to be occupied by Sugar Creek Co. and J. G. Permenter & Co.; 40x100 ft.; cost \$20,000; O. P. Woodcock, Contr.; Marsh & Saxelbye, Archts., both Jacksonville.

Fla., Tampa.—John W. Henderson will erect 3-story building at 306 Tyler St.; 31x70 ft.; cost \$30,000; Mugge Construction Co., Contr.; Francis J. Kennard, Archt.

Ky., Owensboro.—Westerfield Furniture Co., W. D. Westerfield, Prest., will erect \$100,000 building at 2d and Allen Sts.; 75x92 ft.; 4 stories and basement; fireproof; brick; J. W. Whitehead, Archt.; P. C. & R. E. Bryan, Contrs. for concrete work; Jake Theiss, brick work; Owensboro Planing Mill, woodwork; Southern Builders Iron Co., iron and steel work; J. W. Clark, carpenter work. (Lately noted.)

Md., Bethesda.—Thos. Hampton will erect store, bank and lodge building; Milburn,

Heister & Co., Archts., Union Savings Bank Bldg., Washington, D. C.

Tex., Bryan.—John M. Sebesta will erect 1-story brick business building on Bryan St.; 26x115 ft.; metal ceiling; glass front; concrete floors; Olie Martensen, Contr.

### Theaters.

Mo., Carthage.—G. H. Slothower will erect \$60,000 theater; 2 stories; 140x41 ft.; stone; plans by owner; Casey-Turner Constr. Co., Contr. (See Machinery Wanted—Pipe Organ.)

Va., Danville.—Southern Amusement Co. will erect moving-picture theater on Main St.; seating capacity, 2000; 3 stores, 3 stories; cost \$250,000; L. B. Flora & Son, Contrs. (Lately noted.)

### Warehouses.

Fla., Jacksonville.—Carolina Portland Cement Co., W. E. Law, Mgr., will erect warehouse at 1st St. and Railroad Ave.; cost \$20,000; O. P. Woodcock Contracting Co., Contr.

## MACHINERY, PROPOSALS AND SUPPLIES WANTED

Bags (Paper).—C. E. Newton, Jr., 51 Arlington Pl., Macon, Ga.—Names and addresses mfrs. paper and paper bags.

Barrel-making Machinery.—Carolina Machinery Co., Sumter, S. C.—Machinery for making tobacco barrel hogs-head and staves; second-hand preferred.

Beams and Channels, etc.—W. S. Wells, Clerk of Board of Supvrs. of Hinds County, Miss.—Bids until Apr. 4 to furnish and deliver at Edwards, Miss., 25 pieces 25-lb. 10-in. I-beams, 17½ ft. long; 10 pieces 15-lb. L channels, 17½ ft. long.

Bed Spring Materials.—Florida Mattress Factory, Box 233, Tampa, Fla.—To correspond with mfrs. of bed spring materials or dies used for their mfr.; also angle iron, tubing, castings and helices.

Brushes (Tooth).—A. S. Partin, Box 22, Raleigh, N. C.—To contract for mfr. of 500,000 tooth brushes made to special order.

Brick.—T. H. Tarrant, 334 S. Hall St., Webb City, Mo.—Prices on brick. (See Building Material.)

Brick.—John K. Turton Co., 101 Park Ave., New York.—Prices on brick. (See Building Material.)

Bridge Construction.—Nacogdoches County, J. M. Marshall, County Judge, Nacogdoches, Tex.—Bids until Mch. 29 to construct concrete and steel bridges on 19.6 mi. Garrison road, State Highway No. 21; Lamar Acker, County Engr.

Bridge Construction.—Mobile County Board of Revenue and Road Commrs., John D. Hagan, Prest., Mobile, Ala.—Bids until Apr. 11 to construct pile and framed timber fender piers at drawbridge over Dog River; plans, etc., with Clerk Board of Revenue and County Highway Engr.

Bridge Construction.—Virginia State Highway Comsn., 116 S. 3d St., Richmond, Va.—Bids until Apr. 7 to build steel bridge 448 ft. long over Mattaponi River, between King William and King and Queen counties, on State Rd. No. 13; Virginia Project No. 72-B; plans, etc., on file at Richmond and with Resident Engr., Fredericksburg, Va.

Bridge Construction.—Lafayette County Supvrs., W. M. Woodward, Clk., Oxford, Miss.—Bids until Apr. 5 to build bridge across canal on Clear Creek in Beat 4; also 12 bridges in Beat 3 Road Dist.; plans, etc., with Chan- cery Clk.

Brick Machinery.—Graham Hotel Corp., G.

A. Bryant, Secy., Graham, Tex.—Names and addresses mfrs. brick machinery.

Bucket (Clam Shell or Orange Peel).—I. Buford & Co., 509 N. 15th St., Richmond, Va. ½ to ½-yd. clam shell or orange peel bucket; state price and condition.

Building Material.—T. H. Tarrant, 334 S. Hall St., Webb City, Mo.—Prices on zinc shingles, hollow tile and brick for residence.

Building Material.—Herbert S. Green, Archt., Apartado 250, Saltillo, Mexico.—Bids on all material for erection of \$500,000 university; also catalogs and information relative to construction of buildings of all kinds.

Building Material.—Graham Hotel Corp., G. A. Bryant, Secy., Graham, Tex.—Prices on building material for brick, steel and concrete hotel; 5 stories.

Building Material.—John K. Turton Co., 101 Park Ave., New York.—Requests bids on following materials for erection of residence and garage at Memphis, Tenn.: Structural steel, ornamental iron, plastering, tile and marble, millwork, roofing and sheet-metal work, plumbing, painting and electric work; also unit prices on common brick, terra-cotta blocks up to 12 in., lime, sand, cement, etc., and prices on spruce and long-leaf yellow-pine timber.

Canning Plant.—Norfleet S. Smith, Editor of Commonwealth, Scotland Neck, N. C.—Data and prices on establishing and equipment of commercial canning plant.

Cold-storage Plant.—Miller Produce Co., Inc., P. O. Box 1901, Waco, Tex.—Prices from manufacturers on cold-storage plant for wholesale produce and commission house; automatic system preferred.

Catalogs, etc.—Herbert S. Green, Archt., Apartado 250, Saltillo, Mexico.—Catalogs, information, etc., relative to construction of buildings of all kinds. (See Building Material.)

Cement.—John K. Turton Co., 101 Park Ave., New York.—Prices on cement. (See Building Material.)

Cement Floor Covering.—B. E. Collie, South Jacksonville, Fla.—Data and information on material for covering cement floors; contemplates using 2 or 3-ply roll roofing.

Condenser.—Rose Electric Co., 6431 State St., Chicago, Ill.—500 to 600 H. P. surface condenser with all auxiliary equipment, or condenser only.

Conveyor Belt.—Board of Commrs., Port

of New Orleans, 2000 New Court Bldg., New Orleans, La.—Bids until Apr. 12 to furnish one conveyor belt for conveyor No. 6-B of coal-handling plant; plans with H. M. Gallagher, Ch. Engr., 1 Canal St.

Cordage (Sisal and Hemp).—C. E. Newton, Jr., 51 Arlington Pl., Macon, Ga.—Names and addresses mfrs. sisal and hemp cordage.

Crusher (Coal).—Jim Thompson Coal Co., Drakesboro, Ky.—Second-hand coal crusher, hourly capacity 30 to 40 tons.

Crusher (Jaw).—Crockwell Mine & Mill Supply Co., Federal Reserve Bank Bldg., St. Louis, Mo.—Second-hand 36x69 jaw crusher.

Crushing Rolls.—La Fayette Cotton Oil Mills, La Fayette, Ala.—New or second-hand set of crushing rolls, 36-in. long, 5 high; state price, shipping point, plain or ball-bearing.

Dies.—Wm. C. Skaggs, Barnardsville, N. C.—Names and addresses mfrs. of dies for producing core punchings for motors.

Electric Plant Equipment.—City of Hallettsville, Tex., S. M. Kaykendall, City Secy.—Bids until Apr. 14 to improve electric-light plant; install 120 H. P. steam engine, direct connected to A. C. generator, 90 K. V. A., 2300 volts, 3-phase, 60-cycle with exciter; switchboard panel for same; horizontal return-tubular boiler, 150 H. P., for 150 lbs. steam, and fittings for both coal and oil fuel; 150 H. P. open-type feed-water heater; 2 simplex boiler-feed pumps; necessary inter-connecting pipe fittings, steam separator receiver, etc., for present plant; all f. o. b. cars Hallettsville; alternate bids on 200 H. P. steam engine, direct connected to A. C. generator, 150 K. V. A., 2300 volts, 3-phase, 60-cycle with exciter; switchboard, boiler, heater, pumps and fittings as for previous item; plans, etc., on file.

Electrical Equipment, etc.—Hobart B. Upjohn, Archt., 456 Fourth Ave., New York.—Estimates until Apr. 1 on electric work for residence at Roanoke Rapids, N. C.

Electrical Equipment.—C. S. Munroe, Auditor, Georges Creek Coal Corp., Box 131, Charleston, W. Va.—Prices on electrical equipment for 150-ton daily capacity mine.

Electric Sheets.—Wm. C. Skaggs, Barnesville, N. C.—To purchase electric sheets for mfr. of transformers and motor cores.

Electric Work.—John K. Turton Co., 101 Park Ave., New York.—Bids on electric work. (See Building Material.)

**Engine.**—Crockwell Mine & Mill Supply Co., C. R. Crockwell, Mgr., Federal Reserve Bank Bldg., St. Louis, Mo.—22x48 or 24x48 used Corliss engine; high grade, latest model, state condition.

**Films, etc.**—Theater Royal, Chorley Bros., Box 124, Kampala, Uganda, Africa.—To purchase motion-picture films and camera.

**Furniture (Church).**—Box 486, Buckhannon, W. Va.—Second-hand furniture, especially seats for rural church; state price and description.

**Furniture.**—George W. Gray, Vero, Fla.—Prices on furniture for \$15,000 hotel.

**Filtration System.**—Mann & Gatling, Architects, 614-18 Scimitar Bldg., Memphis, Tenn.; information on filtration system. (See Swimming-pool Equipment.)

**Food-products Machinery.**—O. L. Hardgrave, Stann Creek, British Honduras.—Names and addresses mfrs. of mchy. to extract starch from tropical plants; also names mfrs. of mchy. to make tapioca and other food products.

**Furniture.**—Treasury Dept., Supervising Architect's Office, Washington, D. C.—Bids until May 14 to furnish miscellaneous furniture under annual contract for equipment of Federal buildings under control of Treas. Dept. for year ending June 30, 1922, including Douglas and bent-wood chairs, carriers' stools, desks, costumers, umbrella stands, weight clocks, metal lockers, etc.; plans on file.

**Generator.**—J. M. Torrence, Bessemer City, N. C.—Small D. C. generator.

**Gravel.**—Highway Dept., Board State Engrs., 332 Maison Blanche Annex, New Orleans, La.—Bids until Apr. 4 for furnishing 40,000 tons washed gravel; information, etc., on file.

**Gymnasium Supplies.**—F. M. Williamson, Wadesboro, N. C.—Prices on gymnasium supplies.

**Heating Plant.**—T. H. Tarrant, 334 S. Hall St., Webb City, Mo.—Prices on heating plant for residence.

**Heating Plant.**—Water Dept., Board of Awards, City Hall, Baltimore, Md.—Bids until Apr. 6 to furnish and install complete heating plant in buildings at Gay St. yard of Water Dept.; Wm. A. Megraw, Water Engr.

**Heating Plant.**—Board of School Trustees, H. W. Scott, Chrmn., Graham, N. C.—Bids until Apr. 4 to install heating plant in school building; plans and specifications at office Linthicum & Linthicum, Archts., Durham, N. C.

**Heating System.**—Mann & Gatling, Archts., 614-18 Scimitar Bldg., Memphis, Tenn.—Information on heating system. (See Swimming-pool Equipment.)

**Hollow Tile.**—T. H. Tarrant, 334 S. Hall St., Webb City, Mo.—Prices on hollow tile. (See Building Material.)

**Hose (Fire).**—John S. Bond, Chrmn., City Comsn., Jacksonville, Fla.—Bids until Apr. 8 to furnish f. o. b. Jacksonville 2000 ft. of 2½-in. rubber-lined cotton fire hose for fire dept.; T. W. Haney, Chief Fire Dept.

**Ice Plants.**—R. J. Reynolds Tobacco Co., Winston-Salem, N. C.—Names and addresses mfrs. of absorption process ice-manufacturing plants.

**Lighting Plant.**—T. H. Tarrant, 334 S. Hall St., Webb City, Mo.—Prices on lighting plant for residence.

**Lockers.**—Mann & Gatling, Archts., 614-18 Scimitar Bldg., Memphis, Tenn.—Information on lockers for club building.

**Lumber.**—Duval County, Chas. A. Clark, Chrmn., County Commrs., 55 Lancaster Terrace, Jacksonville, Fla.—Bids until Apr. 1 on lumber for 200-ft. span bridge.

**Mill (Cornmeal).**—J. M. Torrence, Bessemer City, N. C.—Mill for making cornmeal.

**Millwork.**—John K. Turton Co., 101 Park Ave., New York.—Bids on millwork. (See Building Material.)

**Mining Machinery.**—C. S. Munro, Auditor, Georges Creek Coal Corp., Box 1341, Charleston, W. Va.—Prices on mining mchy. for 150-ton daily capacity mine.

**Miscellaneous Equipment.**—Lake County Commrs., T. C. Smyth, Clk., Tavares, Fla.—Bids until Apr. 4 on portable convict cage, tents, cots, mattresses, etc.; new or second-hand.

**Miscellaneous Supplies.**—Navy Dept., Bureau of Supplies and Accounts, Washington, D. C.—Bids until Apr. 5 to deliver steel, cast liners, pilot balloons and porcelain moulds; also to deliver steel and copper to navy-yard.

**Miscellaneous Supplies.**—Panama Canal, A. L. Flint, General Purchasing Officer, Washington, D. C.—Bids until Apr. 7 to furnish cable; galvanized wire cloth; drills; tubes; pumps; plungers; caps; arms for portable lamps; clocks; brushes; bricks; ink; pens and paper. Blank forms and information (Circular 2265) on application to offices of Panama Canal; Asst. Purchasing Agts. at Fort Mason, San Francisco.

**Mixer (Concrete).**—Meiring, Hicks & Co., First National Bank Bldg., Williamson, W. Va.—Gasoline engine-driven concrete mixer, about ½-yd. capacity, complete with engine, in good condition; prefer either Smith or Ransome.

**Motor.**—J. M. Torrence, Bessemer City, N. C.—Small D. C. motor.

**Motor.**—T. K. Hudgens, Jr., Prest., Dixie Damp Laundry, Box 102, Spartanburg, S. C.—New or second-hand 10 H. P. motor, 220 volts, 60 cycle.

**Motor (Haulage).**—Jim Thompson Coal Co., Drakesboro, Ky.—8-ton haulage motor, 250 volts, D. C., 36-in. gauge.

**Moulds (Steel).**—F. Moulton Moore, Box 335, New Brunswick, N. J.—Names and addresses mfrs. of steel moulds for castings.

**Orchard Equipment, etc.**—Potomac Fruit & Supply Co., W. B. Connell, Secy.-Treas., Mgr., Martinsburg, W. Va.—Prices on coopeage stock, baskets, spray material and anything used on farm or orchard.

**Ornamental Iron.**—John K. Turton Co., 101 Park Ave., New York.—Bids on ornamental iron. (See Building Material.)

**Painting.**—John K. Turton Co., 101 Park Ave., New York.—Bids on painting. (See Building Material.)

**Paving.**—City, V. M. Ake, Secy., Alexandria, La.—Bids until Apr. 4 to pave sidewalks on Levin and 7th Sts.; concrete; plans, etc., with City Engr.

**Paving.**—City, Geo. Henry, City Clk., Elkins, W. Va.—Bids until Apr. 7 to construct concrete sidewalks on 11th, Court, Diamond and other streets.

**Paving.**—City, D. A. Leman, Clk. and Treas., La Grange, Ga.—Bids until Apr. 14 to construct 25,000 sq. yds. street pavement; watermains, etc.; specifications, etc., with G. A. Sargent, City Engr.

**Paving.**—City, Allen J. Saville, Director Public Works, Richmond, Va.—Bids until Apr. 10 for 125,000 sq. yds. street; durax block, sheet asphalt, granite block and concrete; \$500,000 available; Thos. B. Nurrick, Engr.

**Paving.**—City, R. E. L. Holt, Chrmn., Street Committee, Burlington, N. C.—Bids until Apr. 14 to grade and pave streets with sheet asphalt bitulithic, asphaltic concrete or cement concrete; 50,000 sq. yds. pavement; 40,000 lin. ft. combined curb and gutter;

etc.; plans, etc., with Earl B. Horner, Mayor, Burlington & Ludlow, Engrs., Winston-Salem, N. C.

**Paving.**—City, W. B. Ellison, Mayor, Johnson City, Tenn.—Bids until Apr. 27 to pave streets with concrete, asphalt or asphalt concrete; 50,000 sq. yds. pavement; 31,000 lin. ft. curb and gutter; sanitary sewers, etc.; plans, etc., with W. O. Dyer, Commr. Streets and City Engr.

**Paving.**—City, W. L. Dowell, Clk., Raleigh, N. C.—Bids until Apr. 1 to construct 15,000 lin. ft. straight combined curb and gutter; 1500 lin. ft. curved combined curb and gutter, etc.; plans, etc., with Commr. Public Works.

**Paving.**—City, J. T. Akers, Recorder, Bluefield, W. Va.—Bids until Apr. 8 to construct granolithic sidewalks; plans, etc., with City Engr.

**Paving.**—Comms. Improvement Dist. 6 to 15, S. D. Newton, Engr., Cleveland, Tenn.—Bids until Apr. 7 to improve streets, avenues, etc.; 56,610 sq. yds. paving, 23,895 lin. ft. curbing, 6990 sq. yds. sidewalks, etc.; plans, etc., on file with Engr.

**Paving.**—City, Mrs. Frank Seaman, Auditor, Tulsa, Okla.—Bids until Mch. 31 to pave Yorktown Ave., 16th Pl., 16th St. and Peoria Ave.

**Paving.**—Town, G. E. Horn, Mayor, Mocksville, N. C.—Bids until Apr. 1 to construct 7000 sq. yds. pavement; concrete or concrete base with asphaltic top; 4000 sq. yds. two-course concrete sidewalk; 3500 lin. ft. concrete or granite curb, etc.; plans, etc., with N. S. Mullican, Engr.

**Photo-medallion-making Machine.**—K. I. Gyalani & Co., Box 54, Karachi, India.—Prices and catalogs on photo-medallion-making machine, complete with dies in sets of 3 for each oval and round shapes of cabinets, quarter sizes, etc., including rolling machines to cover photos with celluloid; also medallion parts for fronts and backs of double tin or other metal usually used.

**Pipe.**—Coeburn Utility & Mfg. Co., J. M. Quillin, Jr., Secy.-Treas.—Prices on 4 to 8-in. cast-iron pipe, also wood pipe.

**Pipe.**—Nitro Supply Co., Charleston, W. Va.—Several thousand ft. of 12, 14 and 16-in. pipe; wire location, price and quantity.

**Pipe Organ.**—G. H. Slothower, Carthage, Mo.—Prices on pipe organ for \$30,000 theater.

**Pipe and Fittings.**—John S. Bond, Chrmn., of City Comsn., Jacksonville, Fla.—Bids until Apr. 1 to furnish and deliver f. o. b. cars city storeyard 100 12-ft. lengths of 8-in. Class B cast-iron coated water pipe and 2 tons special fittings; R. N. Ellis, Purchasing Agent, City Hall.

**Piping.**—Carolina Pine Products Co., C. B. Poole, Prest., Hamlet, N. C.—Prices on piping for turpentine-extracting plant.

**Pipe, etc.**—City of South Jacksonville, Fla., R. M. Rogero, Clk.—Bids until Apr. 5 to furnish 9700 ft. of 8 and 10-in. terra-cotta pipe; 400 8x6 and 10x6 Y's terra-cotta pipe; 36 manhole covers and rings; 14 flush tanks, 6-in. syphons; 150 bbls. cement; 50 cu. yds. sand; 65 cu. yds. stone for concrete.

**Pipe Organ.**—Memorial Methodist Church, Rev. S. J. Battin, Pastor.—Pipe organ for church building.

**Plumbing.**—John K. Turton Co., 101 Park Ave., New York.—Bids on plumbing. (See Building Material.)

**Post Office Dept., Equipment.**—Purchasing Agt., Post Office Dept., Washington, D. C.—Bids until Apr. 15 to furnish letter-boxes; package-boxes; combination letter and package-boxes; letter-box posts, fasteners and paint for year commencing July 1; blanks on file.

**Printing Press, etc.**—G. W. Goad, Directors, Chieftain Publishing Co., Jay, Okla.—New or second-hand printing press with different fixtures, including paper cutter; outfit not to exceed \$700.

**Pump (Sand).**—Big Bend Power Co., Scottsville, Va.—Names and addresses mfrs. of and dealers in sand pump, to pump sand out of river.

**Pumps.**—Coeburn Utility & Mfg. Co., J. M. Quillin, Jr., Secy.-Treas.—Prices on deep well pumps.

**Pumps.**—Dixie Machinery Co., 630 Commerce St., Shreveport, La.—Names and addresses mfrs. of boiler-feed and fire underwriter duplex pumps; with view to representation.

**Pumps.**—Carolina Pine Products Co., C. R. Poole, Prest., Hamlet, N. C.—Prices on pumps for turpentine-extracting plant.

**Rails.**—J. K. DeLoach, 52 Sterling St., Atlanta, Ga.—Light relay rails for 100 kilometers of 60-centimeter gauge railway for export; state condition and price c. i. f. Atlantic or French port.

**Retorts and Refineries.**—Carolina Pine Products Co., C. R. Poole, Prest., Hamlet, N. C.—Prices on retorts and refineries for turpentine-extracting plant.

**Road-building Equipment.**—Lake County Commrs., T. C. Smyth, Clk., Tavares, Fla.—Bids until Apr. 4 on road graders, slip drags, asphalt-heating kettle.

**Road Construction.**—Letcher County, Fess Whitaker, Judge, Whitesburg, Ky.—Bids until Apr. 11 to construct 13 mi. county road from Blackey to Sandlick Gap, 3 mi. from mouth Crafts Colly to Mayking, 2 mi. from Hammond to Jenkins, 2 mi. from Jenkins to Pound Gap.

**Road Construction.**—Virginia State Highway Comsn., 116 S. 3d St., Richmond, Va.—Bids until Apr. 7 to construct 5.4 mi. bituminous macadam road on State Rd. No. 14, Campbell County; Virginia Project No. 84; plans, etc., on file at Richmond and with Resident Engr., Lynchburg, Va.

**Road Construction.**—Dept. Highways, State of Tennessee, Nashville, Tenn.—Bids until Apr. 8 for 8.28 mi. State Highway No. 12 between Dyersburg and Newburn, Dyer County; 77,682 sq. yds. bituminous concrete, rock asphalt; bridge over 20-ft. span, etc.; plans, etc., with Dept. Highways.

**Road Construction.**—Madison County Commissioners, Fredericktown, Mo.—Bids until Apr. 2 to construct St. Louis-Poplar Bluff road; 8.211 mi. gravel; Federal Aid Project 101, Section A; plans, etc., at State Highway Office; Jefferson City, Mo., with County Clk., Fredericktown, Mo., and M. S. Murray, Div. Engr., Sikeston, Mo.

**Road Construction.**—Virginia State Highway Comsn., 116 S. 3d St., Richmond, Va.—Bids until Apr. 7 to construct 6.42 mi. grading on State Rd. No. 9, Augusta County; alternate bids for grading and bituminous macadam surfacing; Virginia Project No. 69; plans, etc., on file at Richmond and with Resident Engr., Staunton, Va.

**Road Construction.**—Virginia State Highway Comsn., 116 S. 3d St., Richmond, Va.—Bids until Apr. 7 to construct .55 mi. bituminous macadam road on State Road No. 3, Shenandoah County; Virginia Project No. 72; plans, etc., on file at Richmond and with Resident Engr., Staunton, Va.

**Road Construction.**—Virginia State Highway Comsn., 116 S. 3d St., Richmond, Va.—Bids until Apr. 7 to construct 7.05 mi. bituminous macadam road on State Road No. 11, Wise County; Virginia Project No. 94; plans,

etc., on file at Richmond, and with Resident Engr., Bristol, Va.

**Road Construction.**—Tate County Supvrs., M. H. Thompson, Clk., Senatobia, Miss.—Bids until Apr. 4 to construct 1½ mi. road leading from Wyatte to Marshall County line; plans, etc., with Chancery Clk.

**Road Construction.**—Dept. Highways, State Tennessee, Nashville, Tenn.—Bids until Apr. 8 to construct 13.56 mi. State Highway No. 1, between Sparta and Cumberland County line, White County; 127,389 sq. yds. bituminous macadam surface course; plans, etc., on file.

**Road Construction.**—Manatee County Commissioners, Robt. H. Roesch, Clk., Bradenton, Fla.—Bids until Apr. 4 to grade and place shell or rock in ruts on road beginning at Venice; 3 mi.

**Road Graders.**—W. S. Wells, Clk. of Board of Supvrs. of Hinds County, Miss.—Bids until Apr. 4 to furnish and deliver at Edwards, Miss., 3 road graders.

**Road Rollers.**—P. G. Ligon, 2000 Brookfield Ave., Baltimore, Md.—Steam or gasoline road rollers.

**Rock-crushing Machinery.**—W. J. Sparks, Prest.-Mgr. Sunlight Crushed Stone Co., Mt. Vernon, Ky.—Complete rock-crushing outfit.

**Roofing and Sheet-metal Work.**—John K. Turton Co., 101 Park Ave., New York.—Bids on roofing and sheet-metal work. (See Building Material.)

**Rugs.**—George W. Gray, Vero, Fla.—Prices on rugs for \$15,000 hotel.

**Sash-cord Machinery.**—Icard Mfg. Co., Icard, N. C.—Names and addresses mfrs. of sash-cord mch.

**Sawmill Machinery.**—Dixie Machinery Co., 630 Commerce St., Shreveport, La.—Catalogs of sawmill machinery supply-houses; with view to representation.

**Sewers.**—City of Mocksville, N. C., G. E. Horn, Mayor.—Bids until Apr. 1 to construct 12,000 ft. 6-in. vitrified sewer pipe with manholes; install flush tanks and appurtenances; plans, etc., from N. S. Mullican, Engr.

**Sewers.**—City of Tulsa, Okla., Mrs. Frank Seaman, City Auditor.—Bids until Mch. 30 to construct sanitary sewer with laterals, connections and appurtenances in Dist. No. 176, Ordinance No. 2133; plans, etc., with City Engr.

**Sewers.**—City of La Grange, Ga., D. A. Leman, Clk.-Treas.—Bids until Apr. 14 to construct storm sewers, manholes and inlets; plans, etc., from G. H. Sargent, City Engr.

**Sewers.**—City of Huntington, W. Va., Mat. Miser, Commr. Streets and Sewers.—Bids until Apr. 11 to construct 12-in. vitrified lateral sewers in Nine and One-Half Alley, and in Marshall Ave.; plans, etc., on file, and with A. B. Maupin, City Engr.

**Sewers.**—City of Tampa, Fla., Chas. H. Brown, Mayor-Commr.—Bids until Mch. 29 to construct 1640 lin. ft. 6-in. sanitary sewers, 60 4x6-in. Y connections and 4 manholes in alleys from Swann Ave. to Horatio St.; plans, etc., on file.

**Sewers.**—City of Johnson City, Tenn., W. B. Ellison, Mayor.—Bids until Apr. 27 to construct 20,700 lin. ft. 6 and 8-in. sanitary sewers, 4300 lin. ft. 8 to 24-in. storm sewers, 32 manholes, 40 catch basins and concrete bridge; plans, etc., on file and from W. O. Dyer, Commr. of Streets and City Engr.

**Shaker (Cement Sack) and Bundler.**—Dixie Builders' Supply Co., Hancock Ave. and Foundry Sts., Athens, Ga.—Shaker for shaking cement sacks; also, a sack bundler.

**Sluiceway.**—Dallas County Levee Improve-

ment Dist. No. 6, Dallas, Tex.—Bids for construction of 6x6-ft. reinforced concrete sluiceway 70 ft. long; plans at 1912 Dallas County State Bank Bldg.

**Shovels (Steam).**—Mulligan-Roach Co., 318 Wachovia Bank Bldg., Winston-Salem, N. C.—Names and addresses mfrs. of steam shovels with ½-yd. capacity mounted on a caterpillar tractor.

**Spring Board.**—Mann & Gatling, Archts., 614-18 Scimitar Bldg., Memphis, Tenn.; information on spring board. (See Swimming-pool Equipment.)

**Stack Cookers.**—La Fayette Cotton Oil Mills, La Fayette, Ala.—New or second-hand set-stack cookers suitable for 3-press mill.

**Steel Beams.**—J. I. Kellems, Fort Pierce, Fla.—Prices on steel beams to support second floor of apartment and garage building.

**Steel Building.**—Guyan Machine Shop, Logan W. Va.—Two or more stories, 50x90-ft. steel building for machine shop; preferably arranged for elevator.

**Structural Steel.**—John K. Turton Co., 101 Park Ave., New York.—Bids on structural steel. (See Building Material.)

**Swimming-pool Equipment.**—Mann & Gatling, Archts., 614-18 Scimitar Bldg., Memphis, Tenn.—Information on swimming-pool equipment, including spring boards, filtration system, heating system, lockers, ladders, tile work, etc.

**Tanks and Towers.**—L. E. Floyd, City Engr., Chipley, Ga.—60,000, 100,000 and 200,000-gal. tanks on 100-ft. towers.

**Tanks.**—United States Shipping Board, Emergency Fleet Corp., Hibernian Bank Bldg., New Orleans, La.—Bids until Mch. 30 to construct two 55,000-bbl. capacity fuel-oil tanks on Blakely Island; plans with District Purchasing Agent, Hibernian Bldg., New Orleans, La., and Consol. Engr., United States Shipping Board, Room 507, 45 Broadway, New York.

**Terra-cotta.**—John K. Turton Co., 101 Park Ave., New York.—Prices on terra-cotta blocks up to 12 in. (See Building Material.)

**Tile.**—Mann & Gatling, Archts., 614-18 Scimitar Bldg., Memphis, Tenn.—Information on tile work. (See Swimming-pool Equipment.)

**Timber.**—John K. Turton Co., 101 Park Ave., New York.—Prices on spruce and long-leaf yellow-pine timber. (See Building Material.)

**Turbine Wheel.**—J. M. Torrence, Bessemer City, N. C.—Small turbine wheel for water-power.

**Wall.**—District Commrs., Room 509 District Bldg., Washington, D. C.—Bids until Apr. 18 to reconstruct wall on Canal road between the Aqueduct bridge and Foxhall road; plans with Ch. Clk. Engr. Dept., Room 427 District Bldg.

**Water-Works Equipment.**—City of La Grange, Ga., D. A. Leman, Clk.-Treas.—Bids until Apr. 14 to furnish 250 tons cast-iron pipe and specials, valves and hydrants; lay 2 mi. cast-iron water mains, together with connections to existing mains; plans, etc., from G. H. Sargent, City Engr.

**Water-works.**—City of Mocksville, N. C., G. E. Horn, Mayor.—Bids until Apr. 1 to install 4500 lin. ft. 6-in. cast-iron bell and spigot water mains with fire hydrants and appurtenances; construct 90,000-gal. concrete reservoir and 25,000-gal. tank on 65-ft. tower; plans, etc., from N. S. Mullican, Engr.

**Zinc Shingles.**—T. H. Tarrant, 334 S. Hall St., Webb City, Mo.—Prices on zinc shingles. (See Building Material.)



## Railroad Construction

### Railways.

Mo., Joplin.—Southwest Missouri Railroad Co. proposes extension on Scheffeder Ave., from W. 4th St. to 20th St., about 2 mi. E. J. Pratt, Webb City, Mo., is Mgr.

Tex., Houston.—Construction of the Houston, Bay Shore & Texas City Interurban Rwy.

is to begin Apr. 25, according to announcement by Ed Kennedy, Prest. The first section to be built is 18 mi. long from Houston to the San Jacinto battle ground; materials being obtained.

### Street Railways.

Tex., Wichita Falls.—Wichita Falls Traction Co., J. A. Kemp, Prest., proposes to build an extension.

## INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

### Two Reinforced Concrete Warehouses.

A contract has been awarded to the Turner Construction Co. of New York city to erect a terminal warehouse at Clifton, Staten Island, for the Pouch Terminal Co. The building will be of reinforced concrete, seven stories high, and in plan 120x160 feet. Work will begin April 1, and it is expected that the warehouse will be occupied within six months. The American Dock Co. has also awarded contract to the Turner Construction Co. for erecting a warehouse of reinforced concrete at Tompkinsville, Staten Island. This building will also be seven stories in height and 120x160 feet. Work will begin May 1, and it is similarly expected that this building will be finished in about six months.

### Pittsburgh Branch Opened.

The McClave-Brooks Company of Scranton, Pa., manufacturers of furnace grates for power plants, etc., have opened a branch office in Pittsburgh, the address being 1623 Oliver Building. H. L. Hergett is manager in charge.

### Two-Piece Lighting Unit.

The "Day-Glow" lighting unit, made by the Luminous Specialty Co., 236-238 South Meridian street, Indianapolis, Ind., is a new product of distinctive features, and to which the manufacturers direct particular attention, saying that this is a two-piece unit in which it is possible to remove and replace the lower bowl instantly and without jeopardizing the glass in any way. Yet, it is further noted, the bowl is held so firmly that no vibration or jar can dislodge it, although the spring legs are so finely adjusted that there is no undue pressure upon the glass, and so firmly is the glass engaged that the unit can be held inverted without altering the position of the lower bowl. Moreover, owing to its special construction, it is very easy to keep clean.

### Production Uninterrupted By Fire.

It is announced that the fire at the plant of the Austin Machinery Corporation, Winthrop Harbor, Ill., on March 22, although extensive, will not interfere with production and prompt delivery of the Austin products, as practically all lines of the company's machinery are also being manufactured at the other plants situated at Muskegon, Mich., and at Toledo, O., which latter was formerly the plant of the Toledo Bridge & Crane Co. President B. A. Linderman immediately arranged for these two plants to increase stock production to take up any shortage which might otherwise occur. While a number of machines on which assembly was practically completed were destroyed in the conflagration, the fire did not reach the finished machine warehouse and a number of machines ready for shipment were saved.

The two plants now running are fully equipped to make all standard and special machines in quantity, patterns being kept in duplicate, and all popular sizes are under construction. The corporation also has on hand at both places ample stocks of wagon loaders, popular sizes of trenching machines, backfillers, mixers, pavers, half-yard and three-quarter-yard draglines and shovels, and a lot of one-yard shovels and draglines are now coming through the Toledo plant.

### Announcement.

The Macdonald Engineering Co. announce that C. L. Dewey, formerly president of the Traylor-Dewey Contracting Co., is now with their company as second vice-president in charge of operations in the East, with headquarters at 90 West St., New York, where the office of the company in that city is located. The company also announce the opening of a California office in San Francisco to handle their Pacific Coast work, which, it is noted, has assumed large proportions in recent years. The business of the company is general engineering and construction, particularly in reinforced concrete, and specializing on grain elevators, mills, warehouses, reservoirs, etc.

### Change of Connection.

E. G. Le Laurin has resigned as Southern sales representative of the Southern Supply & Hardware Co. of St. Louis to become associated with W. D. Jenkins, representative of railway equipment and supplies, Dallas, Tex., in a similar capacity, and looking after the Dallas-Houston-New Orleans territory.

### Chamber of Commerce Organized.

The Brinkley Chamber of Commerce of Brinkley, Ark., a town of 3000 population, in Monroe County, was organized recently with a board of governors as follows: Benj. Emmons, R. F. Milwee, Fred. Rusher, H. G. Mitchell, J. H. Stack, J. L. Woodfin, Frank Andrews, A. C. Huddleston, J. S. Mitchell, and Elmo Chaney. Mayor A. S. Bayne is ex officio a member. Benj. Emmons is Prest.; R. F. Milwee, Vice-Prest.; Fred. Rusher, Treas.; W. J. Williams, Secy.

### Important Business Combination.

At the annual meeting of the Detroit Trailer Co. J. B. Mansfield was elected president and general manager; Stephen A. Griggs of Walkerville, Ont., vice-president; E. B. Newton, treasurer; F. L. Tully, secretary. Messrs. Griggs, Mansfield and Tully are the board of directors. Mr. Griggs, who has retired from the presidency, has, it is remarked, been actively engaged continuously for 55 years. He has been in public life more

or less, and was president of the Detroit Common Council. He has sold to Mr. Mansfield and associates a controlling interest in the company, which is now placed in close touch with the Mansfield Steel Corporation, of which Mr. Mansfield is also president, and which manufactures steel bodies for trucks and trailers, so that the Detroit Trailer Co. will now be able to directly supply bodies of that material, which it has not made heretofore. The two organizations will be under the same management, and both will be able to furnish more complete service. Thus the Detroit Trailer Co. will be able to sell their entire output without having to purchase from outside parties. The Mansfield Steel Corporation also announces that steel is completely fabricated for their new addition, to be 85 feet wide and 135 feet deep. Plans were prepared by Smith, Hinchman & Grylls, architects, and the building will be completed about May 15. This structure, besides enlarging the plant, will also provide showrooms with finished stock of the Detroit Trailer Co.

### Sales Agent Appointed.

Willard Fisher, who was connected with the Illinois Zinc Co. for 28 years, has been appointed Eastern sales agent of the American Zinc Products Co., with headquarters at their New York office, 50 Church St., for the sale of sheet zinc, plate zinc and roofing material. M. L. Filley will remain manager of the local New York office.

### Change of Agency.

The Reeves Pulley Co. announce a change in their New York agency from Patterson, Gottfried & Hunter, Inc., to the Standard Supply & Equipment Co., 71 Murray St., where there will be carried complete stocks of Reeves products, viz., variable-speed transmission and wood split pulleys. A full line of repair and replacement parts will also be carried. Wm. L. Garcia, who was head of the power-transmission department of the former agency, will continue related to these products, now being with the new agency. It is remarked that this alliance will result beneficially to the trade.

### Increased Sales Force.

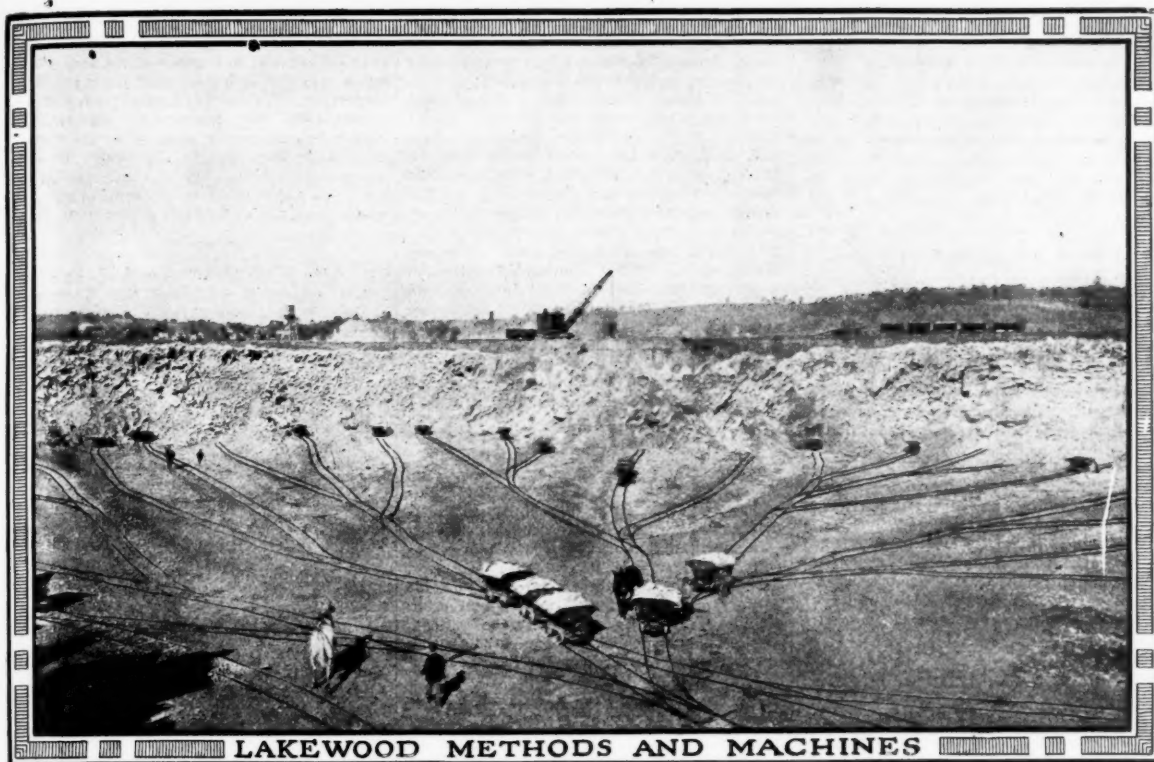
Two changes were effected recently in the district office organization of the Cooper-Hewitt Electric Co. of Hoboken, N. J., makers of Cooper-Hewitt lights. The Philadelphia office force has been increased by the addition of two salesmen, and the force has moved into larger quarters in the Drexel Bldg. The St. Louis district office has moved from the Central National Bank Bldg. to the Title Guaranty Bank Bldg.

### To Sell Electric Furnaces in Canada.

T. H. Watson & Co., Ltd., Sheffield, England, and the Electric Furnace Construction Co., 908 Chestnut St., Philadelphia, Pa., announce that arrangements have been made with the General Combustion Co. of Canada, Ltd., New Birks Bldg., Montreal, to handle, build and sell their various electric smelting, melting and refining furnaces in Canada. The Canadian rights of the Greaves-Etchells type of furnace, which has been widely adopted in the United States, England, France, Spain, Sweden and other foreign countries, are also included in the arrangements. The American company will also co-operate with the Canadian company on the supply and installation of the various types of electrically heated core and mold-drying ovens, annealing and heat-treating furnaces, and on electric-furnace problems in general.

(Continued on Page 122)

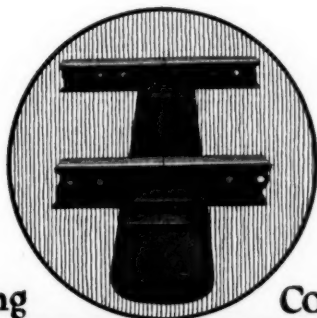
In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.



LAKEWOOD METHODS AND MACHINES

## Flexible Track Layout Speeds Quarry Output

The Knickerbocker Lime Company, Malvern, Pa., hauls 360 yards of limestone a day from quarry to loading dock. With combinations of curved and straight sections of Lakewood narrow gauge track a smooth road is laid to any point in the quarry. Lakewood 1½-yard cars in 4 and 5 car trains are easily hauled by mules to the main switch. Although 360 yards a day is the average, a maximum of 1000 yards is possible. Lakewood cars, locomotives and track reduce costs. We are glad to assist in studying their application to your particular problem.



The Lakewood Engineering

Company, Cleveland U.S.A.

(Continued from Page 120)

**Representatives at Pittsburgh.**

The John H. Carlin Machine Co. of Pittsburgh, Pa., has taken on for that territory the "Wonder" line of concrete mixers, hoists, pumps, backfillers, etc., manufactured by the Construction Machinery Co. of Waterloo, Iowa, and will now be able to meet the demands of purchasers promptly and efficiently.

**Engineering Advertisers Elect Officers.**

The Engineering Advertisers' Association at its recent annual meeting at the Great Northern Hotel, Chicago, elected the following officers for the ensuing year: President, Keith J. Evans, advertising manager Jos. T. Ryerson & Son; vice-president, Julius Holl, advertising manager Link-Belt Company; secretary, D. T. Eastman, advertising manager Eagle-Picher Lead Co.; treasurer, J. B. Patterson, district manager P. H. & F. M. Roots Co.; W. F. Leggett, advertising manager Webster Manufacturing Co.; Benjamin Brooks of the Clay Products Association; Guy S. Hamilton, advertising manager Conveyors Corporation of America, and Edward I. Pratt, advertising manager Kellogg Switchboard & Supply Co., were elected active directors, and E. R. Shaw, president of Power Plant Engineering, was elected associate director.

**Trade Literature.****Trailers for Garbage and Ash Removal.**

Several interesting and instructive bulletins issued by the Lee Trailer & Body Co., 2343-2350 S. La Salle St., Chicago, Ill., present illustrations and descriptions showing what is being done with Lee trailers to remove

garbage, ashes and other refuse, including snow, in Utica, Indianapolis and several other cities. Among the places where these vehicles are being employed are Akron, O.; Dallas, Tex.; Highland Park, Mich.; Gary, Ind.; Cleveland, O.; Kenosha, Wis.; Detroit, Mich.; Endicott, N. Y.; Bridgeport, Conn., and Passaic, N. J. The Lee system of garbage and ash collection has attracted wide attention, and it is expected that before long the list of representative American cities employing it will be much enlarged. It is remarked that it requires less labor and team operation, and that it divides slow-speed collection work and long-haul disposal into separate operations. Moreover, the system is flexible and can be employed for various removal work. Illustrations show how motor trucks haul trains of trailers to the dumping grounds, and then how garbage is dumped into chutes at the point of delivery.

**Interesting to Road Builders.**

A fine catalog of road and street-building machinery, issued by the Good Roads Machinery Co., Inc., 821 Bulletin Bldg., Philadelphia, Pa., carries the inscription, "Everything for the Road Maker," which is truthfully descriptive of its contents. Graders, drags, crushers, elevators, screens, portable engines and boilers, road rollers and other machinery are fully covered by the contents of the book, which has 48 pages, besides an attractive front-cover page in colors.

**Static Condensers.**

In order to overcome the detrimental effect of a low power-factor for comparatively small loads, the General Electric Co. has developed a stationary or static type of condenser, which is described in Bulletin No. 49714-C, superseding Bulletin No. 49714-B.

This type of condenser does not require an attendant for its operation, and therefore may be installed in any out-of-the-way space or in a substation receiving only monthly inspection. These condensers have been standardized for installation on circuits ranging in frequency from 40 to 125 cycles, in voltage from 220 to 2300 volts, and in capacities from 30 to 300 K. V. A. The bulletin is well illustrated and includes a number of photographs of actual installations.

**Road Work at Home and Abroad.**

The Barrett Company of New York and other cities has issued three exceedingly attractive booklets concerning the use of Tarvia for road building, street construction, laying of pavements, etc. One is entitled "How a Tarvia Macadam Roadway Is Constructed," another is "Tarvia Pavements," and the third is generally illustrative of the merits of this material. The first two contain pictures and descriptions relating to the actual work of building roads and pavements; the other concerns more particularly the completed work, which is exhibited by numerous illustrations of roads and streets in various States and cities, and also in foreign countries.

**Features of Oil Refineries.**

"A Modern Refinery" is the name of a finely illustrated bulletin issued by the C. B. Roberts Engineering Co., 19 Milk St., Boston, Mass., and which is briefly descriptive of a 15,000-barrel oil-refining plant recently completed and put in operation by them for the New England Oil Corporation, Fall River, Mass. The plant is situated on

(Continued on Page 124)



# LANCASTER

Vertical Field Storage Tanks with capacities ranging from 355 barrels up to 55,000 barrels are carried in stock for quick delivery.

A complete table showing the many sizes carried as regular stock, their weights, description of the materials from which they are constructed and their capacities is to be found in the new

## LANCASTER TANK BULLETIN

which we have just issued. A copy will be sent you on request.

## LANCASTER Iron Works

NEW YORK OFFICE 501 FIFTH AVE. LANCASTER Pa. INCORPORATED 1910

**The Oscar T. Smith Company**

Manufacturing Bank Stationers

407-9-11 E. SARATOGA STREET

BALTIMORE, MD.

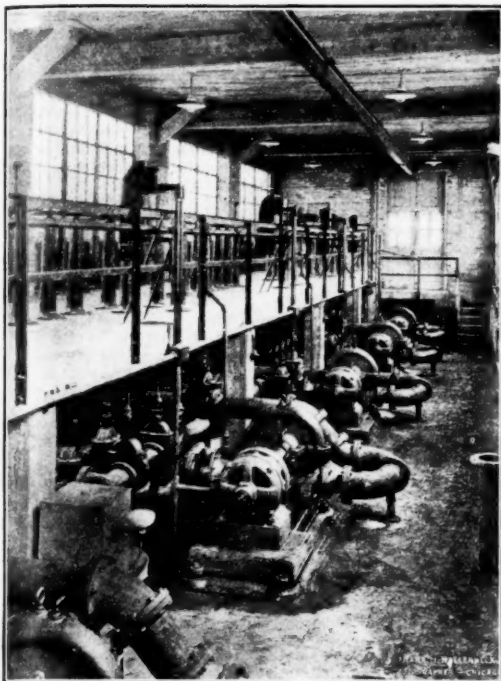
OSCAR T. SMITH  
President

## Turn to the Classified Opportunities Department

—You may find something under  
"Business Opportunities," or other  
headlines to interest you.



## Pumping Gasoline and Light Oils With Dayton-Dowd Centrifugals



The photograph shows part of an installation of Dayton-Dowd 6" Centrifugal pumps for handling gasoline, kerosene and oils in the light oil pump house at the East Chicago Plant of the Sinclair Refining Co. Each pump delivers 1100 G. P. M. at 70-ft. head, operating at 1150 R. P. M. Driven by 25 H. P. motor.

These pumps handle gasoline, benzol, kerosene and superflame from the storage and mixing tanks to the loading racks, or handle from one tank to another containing the same grade of product. There is no connection from the pumps handling kerosene and those handling gasoline.

Dayton-Dowd Pumps are also used for handling the gasoline and kerosene from the stills and run-down tanks to the agitators, and for supplying water for the agitators.

A similar plant of the Sinclair Refining Co. at Coffeyville, Kansas, is also equipped with Dayton-Dowd Centrifugals.

Whatever your Pumping Problem is, take it up with our engineers. Their experience in supplying pumps for every pumping service may prove of value to you.

### DAYTON-DOWD COMPANY

*Manufacturers of Centrifugal Pumps*

215 SECOND STREET

QUINCY, ILL.

*Southern Representatives:*

923 Hurt Bldg., Atlanta  
Box 1692, Richmond

721 Whitney Central Bldg., New Orleans  
2211 Olive St., St. Louis

Isaac Hardeman, Charlotte, N. C.

## BUCKEYE Blower Company

*Announces the opening of a district  
office at ATLANTA, GEORGIA.*

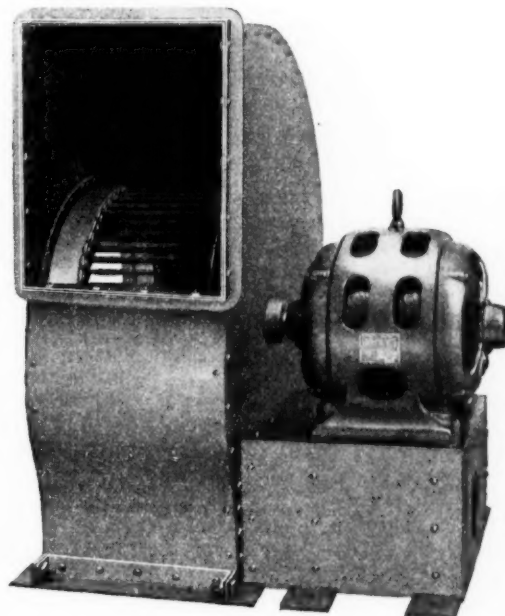
**MR. J. W. HINCHEY, Manager**  
258 Candler Annex

*This new office will enable us to give  
better engineering service to our  
friends in the southern district.*

**BUCKEYE BLOWER CO.**  
**COLUMBUS - - OHIO**

PITTSBURGH  
CHICAGO

CLEVELAND  
ATLANTA



(Continued from Page 122)

the north shore of the Taunton River at tidewater, where sand dunes have disappeared and in their place has risen within seven months a refinery 46 acres in extent for the manufacture of Navy "A" fuel oil from Mexican crude petroleum. There are seventeen pictures, one of which is a panoramic view of the plant; the others show details. As this is a new kind of publication concerning the features of oil refineries, it will be of wide interest. Copies may be obtained from the C. B. Roberts Engineering Co. on request.

#### Diaphragm Force Pump.

"The Humdinger" is a new diaphragm force pump, manufactured by the Ralph C. Carter Company, 152 Chambers street, New York, and an illustrated folder that fully presents its merits says it "is built solid as a battleship" for heavy duty, and will stand up under the hardest kind of daily usage. It is capable of pumping gravel, sand, mud, sewage or other material limpid enough to flow through the pump. The company also remarks that they are putting the best of materials throughout in this product, with the object of enabling everyone using it to say that it is the best. The power used may be either gasoline, kerosene or electric.

#### Twenty-Five Years in Business.

The Cotton States Belting & Supply Co., manufacturers and jobbers of general mill and machinery supplies, Atlanta, Ga., have issued a quarter-century anniversary edition of the Cotton States Arrow, their well-known monthly publication. This, it is noted, marks "the completion of a quarter century of successful and continuous business, conducted under one name, with one directing head, and under one policy," which is described thus: "Good quality, honest quantity, sell cheap, sell a heap, and keep continually at it." Accurate descriptions and illustrations constitute an attractive presentation of the company's activities, and there are a number of likenesses of officers. J. J. Disosway is president.

#### Engineering and Development.

"Achievement" is the caption of a 30-page publication which is being distributed by the J. G. White Engineering Corporation, 43 Exchange Place, New York, and which gives information about and illustrations of power developments, hydro-electric developments, transmission systems and other important engineering projects in this and foreign countries. Several of the fine illustrations are of construction done in the South: for instance, the power plant of the Potomac Electric Power Co., Washington, D. C.; the large steam-electric power plant built for the United States Government at Muscle Shoals, Ala.; the United States Government plant, Nitrate No. 1, Sheffield, Ala.; the Georgia-Carolina Power Co.'s hydro-electric development on the Savannah River, near Augusta, Ga.; several of the industrial dwellings near Sheffield, Ala., and the United States Government gas plant at the same place.

#### Conveyors.

Catalog No. 257 of the Jeffrey Manufacturing Co., Columbus, O., concerning Jeffrey standardized scraper conveyors, is now ready for distribution by the company and will be sent free to anyone interested on request. This catalog features both single and double strand conveyors designed to handle all kinds of loose products in manufacturing and mining industries, power

plants, retail coal yards, canning plants, sugar mills and practically all other industries. It is beautifully and liberally illustrated, and the many pages of instruction, specifications and dimensions given have been compiled in such a way that either engineers or purchasers may easily select the right kind of conveyor to meet their needs, thus saving time required to make drawings and layouts, special designing, pattern making, etc.

#### A Valuable Manual.

"Finding and Stopping Waste in Modern Boiler-Rooms." This is the second revised edition, volume 2, issued by the H. S. B. W. Cochrane Corporation, formerly the Harrison Safety Boiler Works, 17th St. and Allegheny Ave., Philadelphia, Pa. It has more than 400 pages and is fully illustrated with pictures and diagrams, and there is a complete index. It is substantially bound.

#### An Attractive Publication.

An exceedingly attractive and complete catalog is issued by the National Pump & Well Co., Stuttgart, Ark. It presents comprehensively and interestingly the facts concerning the company's products, showing how these pumps, with perforated pipe, wire screen and protecting armor, obtain pure water from far below the surface of the ground, thus providing a healthful water supply for towns and cities, industrial plants and other purposes. The pumps are also used by contractors, mine operators, and for irrigation. An inset displays the method of operation fully, this being a picture of a complete installation and showing the relative positions of a belt-driven multi-stage pump, steel pit and armor screen, being essentially designed for service where great quantities of water are to be obtained from a sand or gravel formation. There are numerous detailed illustrations of the pumps and their parts; also many pictures of installations in operation. When the water to be handled contains elements that are of a destructive nature, special materials are used to withstand the chemical action. The book is handsomely prepared with green cover and gilt lettering.

#### BOOK REVIEWS.

Human Engineering: A Study of the Management of Human Forces in Industry. By Eugene Wera, M.E., E.E. New York and London: D. Appleton & Co. 1921.

A stable settlement of labor problems by eradicating the fundamental causes of discontent is the aim of what is called "human engineering" in this volume. The author describes this as "a positive and constructive management of human forces for a natural promotion of greater democracy." He says that modern management "has failed to remove the distressing unrest of labor because it has managed industry only for the personal benefit of both employer and employed. It has ignored labor as a social group and has disregarded the social purpose of industry. The obsolescence and one-sidedness of such a method suggest the need of a new principle—that of stimulating labor as a whole toward production at large for social purposes." He also says: "But the present unrest is not due chiefly to circumstances of the moment; it is due more to deep-rooted aspirations which mark a stage in the actual evolution of society." Toward the end of the book, after having considered and commented upon things as they are, Mr. Wera presents his ideals as to industrial life and as to the social side of it. He declares that no funda-

mental transformation of industry or society is needed to peacefully settle industrial problems, but that logical development of our institutions can accomplish it. He also says that the substance of this work was inspired by a quarter century of industrial life. He appears to be striving for the attainment of a high ideal, one extremely difficult of realization, but he believes the goal can be reached. His declared purpose is to give everyone interested in the management of labor an understanding of the "individual and collective aspirations and motives of their workers," and to make plain the principles of labor management which stand for industrial and social progress.

Training Industrial Workers. By Roy Wilmarth Kelly. With an Introduction by John M. Brewer, Ph.D. New York: The Ronald Press Co. 1920.

"Of the more than eight million persons engaged in industrial pursuits in the United States," says the author in his prefatory remarks, "not one-third have a grammar-school education. Those who have had any effective vocational training represent a much smaller proportion of the total." With this introduction of his subject, accompanied by other observations along the same line, he proceeds, in twenty chapters, to present conditions as he sees them in detail and to make clear the things which should, in his opinion, be done to improve them. First, he considers industrial training and present-day industry, then inadequate industrial training and its results, followed by a chapter on earlier forms of apprenticeship. Beginnings in modern industrial education, national and State aid for vocational education, technical schools and the development of their possibilities, and the relation of employment management to industrial training, follow successively. Next, Mr. Kelly takes up the subject of the new apprenticeship, training and improvement in service, the training of minor executives, of foremen, and vocational guidance in school and in industry. This carries the work on to the fourteenth chapter, after and including which the book relates to the conduct of industrial establishments along the lines the author has in mind, in the course of which there are numerous valuable suggestions and examples of interest to industrial executives. The introduction is written by Dr. Brewer, who, among other comments, says: "The most interesting thing about this work is that it shows that there is no possibility of avoiding the education of industrial workers. In America there can be no escape from education and progress." The volume is finely printed on heavy paper and is bound substantially in blue cloth with gilt lettering. There are 437 pages.

Employee Training: A Study of Education and Training Departments in Various Corporations. By John Van Liew Morris, Ph.D. First Edition. New York and London: McGraw-Hill Book Co., Inc. 1921.

During his preliminary studies for the preparation of this book the author, it is stated, visited manufacturing plants employing from 500 to 50,000 men. He gives special attention to the apprentice problem and presents the results of a thorough consideration of the educational and training methods used by various corporations. Altogether, there are 35 vocational programs outlined, and those of the companies manufacturing steel products are more than ordinarily valuable because of the numerous classes of employees engaged therein. Manufacturers are thus

(Continued on Page 126)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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(Continued from Page 124)

offered clear and valuable aid in formulating their training plans so as to obtain the most desirable results. Sections I, II, III and IV comprise the 35 different industrial programs and include descriptions of the methods of well-known establishments like Westinghouse, General Electric, Western Electric, Goodyear Tire, Ford Motor, Packard Motor, Carnegie Steel, Winchester Arms and others of equal prominence in different lines. These sections are followed by Section V, which deals with the training of apprentices and technical men, special training, instruction for employe improvement, etc. The book is printed in a superior manner in large type on fine paper. Its binding is of dark green cloth with gold lettering. There are more than 300 pages.

**Foundry Moulding Machines and Pattern Equipment:** A Treatise Showing the Progress Made by the Foundries Using Machine Moulding Methods. By Edwin S. Carman, Mechanical Engineer. Second Edition. Cleveland: The Osborn Manufacturing Co. 1921.

In this comprehensive book of 225 pages the author throughout displays an earnest endeavor to present a work which will be of general help to everyone who is interested in foundry practice. It is designed not only to be a guide for practical use in foundries, but also to be a textbook for study in technical schools, in libraries, etc. Mr. Carman shows in one of his chapters, by the use of parallel columns, the labor-saving advantages of machine moulding methods as compared with the old-fashioned manner of producing castings. His work is completely and copiously illustrated with pictures, diagrams, views of cross-sections, etc., which, taken in connection with the text, acquaint the reader in detail with the intricacies of practical foundry work done under the new methods as contrasted with the old. This second edition, as he remarks, covers more completely many details and ramifications of the art of machine moulding than was done in the first, and a new chapter has been incorporated for the use of students, this treating with the fundamentals of machine moulding; it is both elementary and advanced in theory and practice. It is especially gratifying to observe the conscientious manner of the author displayed by the pains taken to make the reader comprehend all that he wishes to convey, and the completeness of the book constitutes full evidence that he has succeeded in his object. The volume is strongly bound in red cloth with back and corners of a specially substantial fabric. The lettering is in gold.

## Financial News

### New Financial Corporations.

Ala., Alabama City.—C. B. Foreman, Attalla, Ala., and others are interested in organizing bank with \$25,000 capital.

Fla., Miami.—Peoples Mortgage & Loan Co., capital \$250,000, inceptd. with E. P. Miller, Wm. R. Eck, Frank Van Anden.

Ky., Central City.—Citizens Union Bank, capital \$30,000, inceptd. with Edgar Nicholls, Claude Nicholls, Lucian Miller.

Md., Baltimore.—Baltimore International Sales Co., 1318 Continental Bldg., capital \$25,000, inceptd. with Wm. H. Claire, F. Herbert Haines, Albert A. Stockley.

Md., Baltimore.—American Home Building

and Loan Assn., 443 E. 20th St., capital \$1-300,000, organized with A. G. Francis, Prest.; L. C. Blaney, V.-P.; M. F. Thompson, Secy.; S. W. Blaney, Treas. (Supersedes recent item.)

Miss., Jackson.—Mississippi Fire Insurance Co., capital \$1,000,000, organized with temporary officers as follows: G. A. Wilson, Prest., Greenwood, Miss.; A. F. Barbour, V.-P., Yazoo City, Miss.; J. P. Taylor, Treas., Winona, Miss.

N. C., Charlotte.—Security Investment Co., capital \$100,000, inceptd. with O. J. Thels, E. R. Smith, S. E. Messer.

N. C., Raleigh.—Community Building Co., capital \$100,000, will organize with A. F. Guirken and others.

N. C., Winston-Salem.—Dunnigan Brokerage Co., capital \$100,000, inceptd. with C. V. Dunnigan, D. R. Dunnigan, R. V. Maxwell.

Okl., McAlester.—Murray Investment Co., capital \$100,000, inceptd. with W. L. Milner, John B. Rose, F. M. Sowle.

Okl., Tulsa.—Peoples Building and Loan Assn., capital \$300,000, inceptd. with Tyree G. Park, H. Waddell, Al. N. Jochem.

S. C., Charleston.—Stone Investment Co., capital \$500, organized with Louis A. Melchers, Jr., Prest.; H. A. Schroeder, Secy.-Treas.

Tenn., Kingsport.—Interstate Trust and Savings Bank, capital \$25,000, organized with S. N. Haws, Prest.; L. R. Warriner, V.-P.; J. M. Cooner, Cashr. (Supersedes previous item.)

Va., Farmville.—Farmville Loan Co., capital \$10,000, inceptd. with Andrew Daniel, Robert Atkinson, I. S. Bennett.

Va., Norfolk.—Guaranty Building & Loan Co., capital \$500,000, organized with C. E. Rabey, Prest.; C. Ambler Wilcox, Secy.

Va., Norfolk.—Reliance Insurance Agency, capital \$25,000, organized with T. W. Mathews, Prest., Portsmouth, Va.; J. L. Brister, Secy., Norfolk.

W. Va., Beckley.—Raleigh Banking & Trust Co., capital \$100,000, organized with E. C. Minter, Prest.; E. E. Huddleston, V.-P.; R. G. Ross, Cashr.

W. Va., Charleston.—Charleston Business and Professional Women's Building Assn., capital \$25,000, inceptd. with Olive Alles, Irene Bullard, Christine I. Coffey.

W. Va., Eccles.—Bank of Eccles, capital \$25,000, inceptd. with C. P. Munch, F. H. Sisler, W. C. Agee.

W. Va., Morgantown.—Commercial Bank, capital \$100,000, organized with W. H. Davis, Prest.; Clyde E. Jacobs, V.-P.; W. H. Ashcraft, Cashr. (Previously noted.)

### New Securities.

Ala., Ashville.—Road.—St. Clair County will receive bids until Apr. 8 on \$56,250 of 8 per cent \$500 denomination road warrants. Address Perkins McCerndon. (Lately noted.)

Ala., Birmingham.—Road.—Jefferson County sold \$80,000 of 5 per cent semi-annual road bonds, dated Apr. 1, 1920, to Vines & Miers, Contrs., at par and accrued interest; D. C. Ball, Prest. Board of Revenue. (Supersedes recent item.)

Ala., Huntsville.—Road.—Madison County will vote about May 1 on \$300,000 road bonds; C. H. Pulley, Prest. Board of Revenue.

Ark., Bentonville.—Road.—Hanchett Bond Co., Chicago, Ill., has purchased \$350,000 of 6 per cent semi-annual \$1000 denomination Benton County Road Dist. No. 5 road bonds.

D. C., Washington.—Sewer and Water.—Rejected bids on \$375,000 Washington Suburban Sanitary Dist. bonds; Wm. T. S. Curtis, Com-

missioner, 1420 New York Ave. (Lately noted inviting bids.)

Fla., Bronson.—Road and Bridge.—Levy County will receive bids until Apr. 22 at Inglis, Fla., on \$100,000 Road and Bridge Dist. No. 1 bonds; R. T. King, Trustee. Address Fred. Cubberly, Atty., Gainesville, Fla.

Fla., Daytona.—Will receive bids on \$450,000 of 5 per cent semi-annual \$1000 denomination bonds, dated Nov. 1, 1919. Address City Commrs.

Fla., Deland.—Sewer, Water and Street.—May vote on sewer, water and street bonds. Address The Mayor.

Fla., Fort Pierce.—School.—Vero District of St. Lucie County will vote Apr. 12 on \$30,000 bonds. Address Board of Education.

Fla., St. Augustine.—Sewer and Water.—Will issue \$425,000 of 5½ per cent \$500 denomination 16-20 and 30-yr. water and sewer bonds in series A, B and C; Eugene Masters, City Mgr. (Previously noted.)

Ga., Calhoun.—Road.—Gordon County will vote Apr. 7 on \$300,000 of 6 per cent \$1000 denomination 28-yr. bonds; J. D. Keever, Commr. Roads and Revenues. (Supersedes recent item.)

Ga., College Park.—School, Sewer and Street.—Will vote Apr. 23 on \$50,000 school, \$10,000 sewer and \$10,000 street bonds; W. W. Bateman, Mayor. (Lately noted.)

Ga., Leesburg.—School.—Lee County sold \$55,000 of 5 per cent Leesburg School Dist. bonds at 85.50; S. J. Powell, County Supt. Board of Education. (Lately noted inviting bids.)

Ga., Thomaston.—Road.—Upson County sold \$150,000 of 6 per cent \$500 denomination 20½-year road bonds at 97.76; M. H. Sandwich, Clk. County Commrs. Roads and Revenues. (Lately noted inviting bids.)

Ky., Mayfield.—School.—Sold school bonds for \$81,800 to First National Bank. Address The Mayor.

La., Bossier.—Water.—Will sell \$30,000 water bonds; these bonds were voted 4 years ago. Address The Mayor.

La., St. Bernard.—St. Bernard Parish will receive bids until Apr. 21 on \$35,000 road bonds. Address Police Jury.

La., St. Martin.—Road.—St. Martin Parish will receive bids until Apr. 22 on \$300,000 Road Dist. No. 1 bonds; R. J. Bienville, Prest. Police Jury.

La., St. Martinsville.—School.—St. Martin Parish sold \$300,000 of 5 per cent 30-year school bonds to Lafayette Bank Trust Co., Lafayette, La.; W. C. Perrault, Secy. School Board. (Lately noted inviting bids.)

Md., Annapolis.—School.—Anne Arundel County will receive bids until Apr. 12 on \$150,000 school bonds. Address Clk. County Commrs.

Md., Denton.—Road.—Caroline County will receive bids until Apr. 5 on \$50,000 of 5 per cent serial \$1000 denomination road bonds, dated Apr. 1, 1921; maturing serially \$5000 Oct. 1, 1926 to 1935, inclusive; W. C. Todd, Prest. County Commrs.

Md., Oakland.—Electric.—Will receive bids until Apr. 4 on \$10,000 of 5 per cent \$1000 denomination electric bonds; A. G. Ross, Town Clk.

Md., Salisbury.—Road.—Wicomico County will receive bids until April 5 on \$50,000 of 5½ per cent serial lateral road bonds, maturing \$9000 each Oct. 1 from 1924 to 1933; W. C. Mitchell, Prest. County Commrs.

Miss., Hattiesburg.—City, School and Fire Equipment.—Sold \$365,000 of 6 per cent semi-annual bonds to Weil, Roth & Marx Co., Cincinnati, O. Address City Commrs. (Lately noted inviting bids.)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.